



RECEIVED

OCT 24 2003

1/44

TECH CENTER 1600/2900

FIG. 1

R35464	GGCCGGGTCTG	TTTCTCGCCT	GGCTGGGATC	GCTGCTCCTC	TCTGGGTCC	50
ORF	P G R	F S P	G W D R	C S S	L G S	16
R35464	TGGCCGGCG	ACCGAGAACG	CAGCATCCAC	GACTTCTGCC	TGGTGTGAA	100
ORF	W P A D	R E R	S I H	D F C L	V S K	33
R35464	GGTGGTGGGC	AGATTCCGGG	CCTCCATGCC	TAGGTGGTGG	TACAATGTCA	150
ORF	V V G	R F R A	S M P	R W W	Y N V T	50
R35464	CTGACGGATC	CTGCCAGCTG	TTTGTGTATG	GGGGCTGTGA	CGGAAACAGC	200
ORF	D G S	C Q L	F V Y G	G C D	G N S	66
R35464	AATAATTACC	TGACCAAGGA	GGAGTGCCTC	AAGAAATGTG	CCACTGTAC	250
ORF	N N Y L	T K E	E C L	K K C A	T V T	83
R35464	AGAGAATGCC	ACGGGTGACC	TGGCCACCAAG	CAGGAATGCA	GCGGATTCC	300
ORF	E N A	T G D L	A T S	R N A	A D S S	100
R35464	CTGTCCCAAG	TGCTCCAGA	AGGCAGGATT	CTTGAAGACC	ACTTCAGCGA	350
ORF	V P S	A P R	R Q D S	*	R P L Q R	116
R35464	TATGTTCAA	NTATTGNAAG	AATAATTGCA	CCGNCAACGN	ATT-----	393
ORF	Y V S *	I *	R I I A	P *	T *	130

KEY

R35464 = Nucleic acid sequence of EST R35464 (SEQ ID NO:12)

ORF = EST R35464 Open Reading Frame Translation (SEQ ID NO: 13)



RECEIVED

OCT 24 2003

2/44

TECH CENTER 1600/2900

FIG. 2

R74593	GCAATAATTA CCTGACCAAG GAGGAGTGCC TCAAGAAATG TGCCACTGTC	50
ORF	Q * L P D Q G G V P Q E M C H C H	17
R74593	ACAGAGAATG CCACGGGTGA CCTGGCCACC AGCAGGAATG CAGCGGATTG	100
ORF	R E C H G * P G H Q Q E C S G F	33
R74593	CTCTGTCCCA AGTCTCCCAG AAGGCAGGAT TCTGAAGACC ACTCCAGCGA	150
ORF	L C P K S P R R Q D S E D H S S D	50
R74593	TATGTTCAAC TATGAAGAAT ACTGCACCGC CAACGCAGTC ACTGGGCCTT	200
ORF	M F N Y E E Y C T A N A V T G P C	67
R74593	GCCGTGCATC CTTCCCACGC TGTTACTTTG ACGTGGAGAG GAACTCCTGC	250
ORF	R A S F P R W Y F D V E R N S C	83
R74593	AATAACTTCA TCTATGGAGG CTGCCGGGGC AATAAGAAC A GCTACCGCTC	300
ORF	N N F I Y G G C R G N K N S Y R S	100
R74593	TGAGGAGGCC TGATGCTCC GCTGCTTCCG CCAGCAGGAG AATCCTCCCC	350
ORF	E E A C M L R C F R Q Q E N P P L	117
R74593	TGCCCCCTGG CTCAAAGGTG GTGGTTCTGG CCGGGGCTGT TTCGTGATGG	400
ORF	P L G S K V V V L A G A V S * W	133
R74593	TGTTGATCCT TTTCTGGGG AGCNTCCATG GTCTTACTGA TTCCGGGTGG	450
ORF	C * S F S W G A S M V L L I P G G	150
R74593	CAAGGAGGAA CCAGGAGCGT GCCCTGCGGA NCCTCTGGAG CTTGGAGAT	500
ORF	K E E P G A C P A X R L E L R R *	167
R74593	GACAAGGGNT	510
ORF	Q G	169

KEY

R74593 = Nucleic acid sequence of EST R74593 (SEQ ID NO: 14)
 ORF = EST R74593 Open Reading Frame Translation (SEQ ID NO: 15)

RECEIVED

OCT 24 2003

3/44

TECH CENTER 1600/2900



FIG. 3

R35464	GGCCGGGTCGT	TTCTCGCCTG	GCTGGGA-TC	GCTGCTCCTC	TCTGGGGTCC	50
N39798			TGGGANTC	GCTGCTCCTC	TCTGGGGTCC	28
H94519	GCNGCG-CGT	TNNTCGCNT-	GCTGGGA-TC	GCTGCACCTC	TCTGGGGTCC	47
R74593 corr.	-----	-----	-----	-----	-----	-----
Consensus	GGCCGGGTCGT	TTCTCGCCTG	GCTGGGA-TC	GCTGCTCCTC	TCTGGGGTCC	50
Translation	A G S F	L A W	L G S	L L L	S G V	-3
R35464	TGGCCGGCCG	ACCGAGAACG	CAGCATCCAC	GACTTCTGCC	TGGTGTGAA	100
N39798	TGG-CGGCCG	ACCGAGAACG	CAGCATCCAC	GACTTCTGCC	TGGTGTGAA	77
H94519	NGG-CGGCCG	ACCGAGAACG	CAGCATCCAC	GACTTCTGCC	TGGTGTGAA	96
R74593 corr.	-----	-----	-----	-----	-----	-----
Consensus	TGG-CGGCCG	ACCGAGAACG	CAGCATCCAC	GACTTCTGCC	TGGTGTGAA	99
Translation	L A A D	R E R	S I H	D F C L	V S K	15
R35464	GGTGGTGGGC	AGATTCCGGG	CCTCCATGCC	TAGGTGGTGG	TACAATGTCA	150
N39798	GGTGGTGGGC	AGATGCCGGG	CCTCCATGCC	TAGGTGGTGG	TACAATGTCA	127
H94519	GGTGGTGGGC	AGATGCCGGG	CCTCCATGCC	TAGGTGGTGG	TACAATGTCA	146
R74593 corr.	-----	-----	-----	-----	-----	-----
Consensus	GGTGGTGGGC	AGATGCCGGG	CCTCCATGCC	TAGGTGGTGG	TACAATGTCA	149
Translation	V V G	R C R A	S M P	R W W	Y N V T	32
R35464	CTGACGGATC	CTGCCAGCTG	TTTGTGTATG	GGGGCTGTGA	CGGAAACAGC	200
N39798	CTGACGGATC	CTGCCAGCTG	TTTGTGTATG	GGGGCTGTGA	CGGAAACAGC	177
H94519	CTGACGGATC	CTGCCAGCTG	TTTGTGTATG	GGGGCTGTGA	CGGAAACAGC	196
R74593 corr.	-----	-----	-----	-----	-----	-----
Consensus	CTGACGGATC	CTGCCAGCTG	TTTGTGTATG	GGGGCTGTGA	CGGAAACAGC	199
Translation	D G S	C Q L	F V Y G	G C D	G N S	48
R35464	ATAATTACC	TGACCAAGGA	GGAGTGCCTC	AAGAAATGTG	CCACTGTCAC	250
N39798	ATAATTACC	TGACCAAGGA	GGAGTGCCTC	AAGAAATGTG	CCACTGTCAC	227
H94519	ATAATTACC	TGACCAAGGA	GGAGTGCCTC	AAGAAATGTG	CCACTGTCAC	246
R74593 corr.	-----	-----	-----	-----	-----	-----
Consensus	ATAATTACC	TGACCAAGGA	GGAGTGCCTC	AAGAAATGTG	CCACTGTCAC	52
Translation	N N Y L	T K E	E C L	K K C A	T V T	249
R35464	ATAATTACC	TGACCAAGGA	GGAGTGCCTC	AAGAAATGTG	CCACTGTCAC	65
N39798						
H94519						
R74593 corr.						
Consensus						
Translation						
R35464	AGAGAATGCC	ACGGGTGACC	TGGCCACCA	CAGGAATGCA	CGGGATTCC	300
N39798	AGAGAATGCC	ACGGGTGACC	TGGCCACCA	CAGGAATGCA	CGGGATTCC	277
H94519	AGAGAATGCC	ACGGGTGACC	TGGCCACCA	CAGGAATGCA	CGGGATTCC	296
R74593 corr.	-----	-----	-----	-----	-----	-----
Consensus	AGAGAATGCC	ACGGGTGACC	TGGCCACCA	CAGGAATGCA	CGGGATTCC	102
Translation	E N A	T G D L	A T S	R N A	A D S S	299
R35464	AGAGAATGCC	ACGGGTGACC	TGGCCACCA	CAGGAATGCA	CGGGATTCC	82
N39798						
H94519						
R74593 corr.						
Consensus						
Translation						
R35464	CTGTCCCAAG	TGCTCCCAGA	AGGCAGGATT	CTTGAAGACCC	ACTTCAGCGA	350
N39798	CTGTCCCAAG	TGCTCCCAGA	AGGCAGGATT	CT-GAAGACCC	ACTCCAGCGA	326
H94519	CTGTCCCAAG	TGCTCCCAGA	AGGCAGGATT	CT-GAAGACCC	ACTCCAGCGA	345
R74593 corr.	-----	-----	-----	-----	-----	-----
Consensus	CTGTCCCAAG	TGCTCCCAGA	AGGCAGGATT	CT-GAAGACCC	ACTCCAGCGA	151
Translation	V P S	A P R	R Q D S	E D H	S S D	348
R35464	CTGTCCCAAG	TGCTCCCAGA	AGGCAGGATT	CT-GAAGACCC	ACTCCAGCGA	98

OCT 24 2003

TECH CENTER 1600/2900

4/44



FIG. 3 (Cont.)

R35464	TATGTTCAA	NTATTGNAAG	AATAATTGCA	CCGNCAACGN	ATT-----	393
N39798	TATGTT-CAA	CTA-TG-AAG	AATACT-GCA	CCGCCAACGC	AGTCACTGGG	372
H94519	TATGTT-CAA	CTA-TG-AAG	AATACTGGCA	CCGCCAACGC	ATTCACTGGG	392
R74593 corr.	TATGTT-CAA	CTA-TG-AAG	AATACT-GCA	CCGCCAACGC	AGTCACTGGG	197
Consensus	TATGTT-CAA	CTA-TG-AAG	AATACT-GCA	CCGCCAACGC	AGTCACTGGG	394
Translation	M F N Y E E Y C T A N A V T G					113
R35464	-----	-----	-----	-----	-----	
N39798	CCTTGC-GTG	GAATCCTTTC	CCACGCTGGN	AATTTNGACG	TTGAGAAGGA	421
H94519	CCT-GC-GTG	-CATCCTT-C	CCACGCTGGT	ACTTT-GNCG	-----	427
R74593 corr.	CCTTGCCGTG	-CATCCTT-C	CCACGCTGGT	ACTTT-GACG	TGGAGA-GGA	243
Consensus	CCTTGCCGTG	-CATCCTT-C	CCACGCTGGT	ACTTT-GACG	TGGAGA-GGA	440
Translation	P C R A S F P R W Y F D V E R N					129
R35464	-----	-----	-----	-----	-----	
N39798	AC-----	-----	-----	-----	-----	423
H94519	-----	-----	-----	-----	-----	
R74593 corr.	ACTCCTGCAA	TAACTTCATC	TATGGAGGCT	GCCGGGGCAA	TAAGAACAGC	293
Consensus	ACTCCTGCAA	TAACTTCATC	TATGGAGGCT	GCCGGGGCAA	TAAGAACAGC	490
Translation	S C N N F I Y G G C R G N K N S					145
R35464	-----	-----	-----	-----	-----	
N39798	-----	-----	-----	-----	-----	
H94519	-----	-----	-----	-----	-----	
R74593 corr.	TACCGCTCTG	AGGAGGCCTG	CATGCTCCGC	TGCTTCCGCC	AGCAGGAGAA	343
Consensus	TACCGCTCTG	AGGAGGCCTG	CATGCTCCGC	TGCTTCCGCC	AGCAGGAGAA	540
Translation	Y R S E E A C M L R C F R Q Q E N					162
R35464	-----	-----	-----	-----	-----	
N39798	-----	-----	-----	-----	-----	
H94519	-----	-----	-----	-----	-----	
R74593 corr.	TCCTCCCCTG	CCCCTTGGCT	CAAAGGTGGT	GGTTCTGGCC	GGGGCTGTTT	393
Consensus	TCCTCCCCTG	CCCCTTGGCT	CAAAGGTGGT	GGTTCTGGCC	GGGGCTGTTT	590
Translation	P P L P L G S K V V V L A G A V S					179
R35464	-----	-----	-----	-----	-----	
N39798	-----	-----	-----	-----	-----	
H94519	-----	-----	-----	-----	-----	
R74593 corr.	CGTGATGGTG	TTGATCCTT	TCCTGGGGAG	CNTCCATGGT	CTTACTGATT	443
Consensus	CGTGATGGTG	TTGATCCTT	TCCTGGGGAG	CNTCCATGGT	CTTACTGATT	640
Translation	* W C * S F S W G A S M V L L I					195
R35464	-----	-----	-----	-----	-----	
N39798	-----	-----	-----	-----	-----	
H94519	-----	-----	-----	-----	-----	
R74593 corr.	CCGGGTGGCA	AGGAGGAACC	AGGAGCGTGC	CCTGCGGANC	GTCTGGAGCT	493
Consensus	CCGGGTGGCA	AGGAGGAACC	AGGAGCGTGC	CCTGCGGANC	GTCTGGAGCT	690
Translation	P G G K E E P G A C P A * R L E L					212
R35464	-----	-----	-----	-----	-----	
N39798	-----	-----	-----	-----	-----	
H94519	-----	-----	-----	-----	-----	
R74593 corr.	TCGGAGATGA	CAAGGGNT				511
Consensus	TCGGAGATGA	CAAGGGNT				708
Translation	R R * Q G					217



RECEIVED

OCT 24 2003

5/44

TECH CENTER 1600/2900

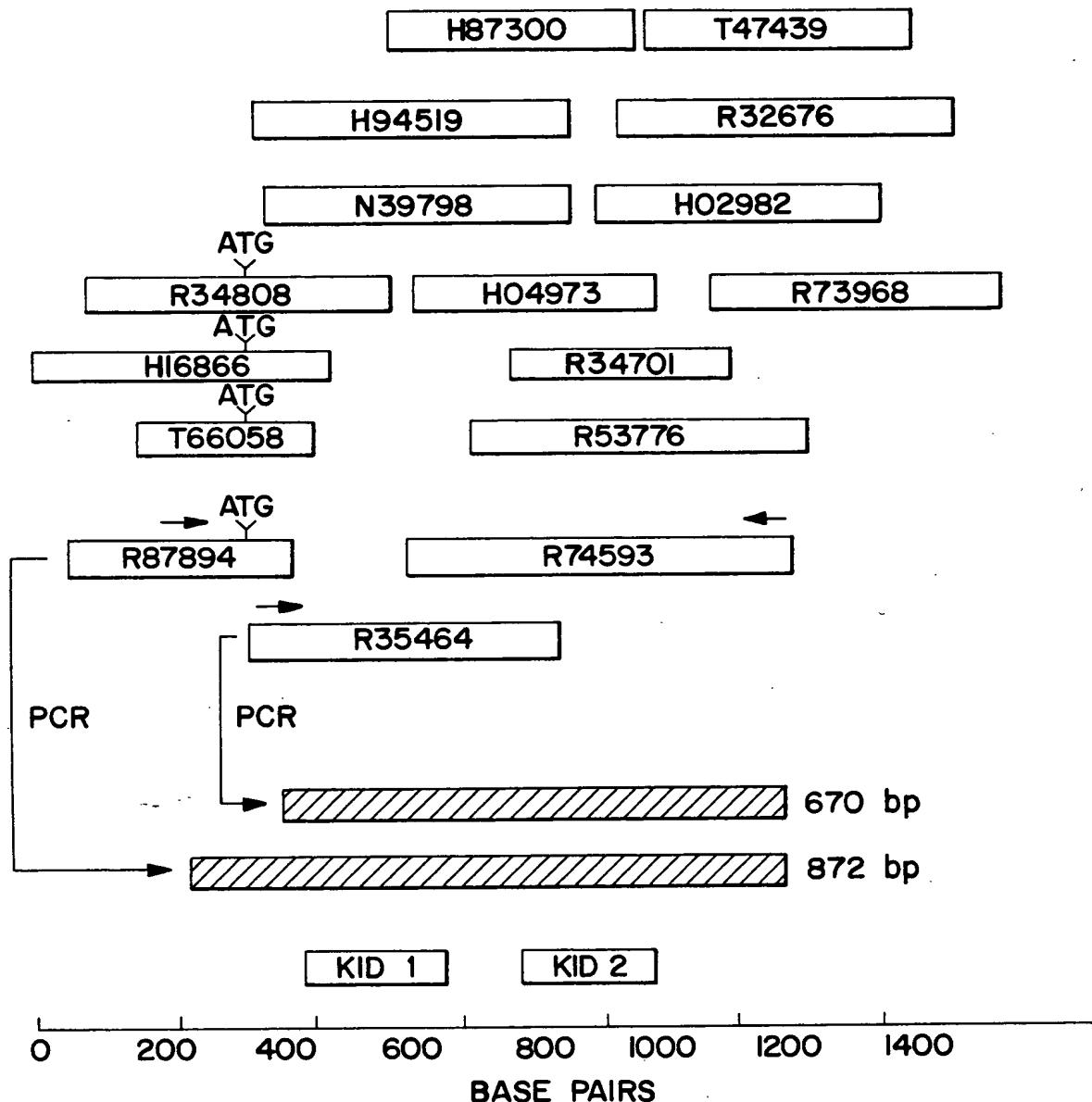
FIG. 3 (Cont.)

KEY

R35464 = Nucleic acid sequence of EST R35464 (SEQ ID NO.: 12)
N39798 = Nucleic acid sequence of EST N39798 (SEQ ID NO.: 17)
H94519 = Nucleic acid sequence of EST H94519 (SEQ ID NO.: 16)
R74593 corr = Corrected version of (SEQ ID NO.: 14) G at b.p. 114
Consensus = Nucleic acid sequence for human bikunin (SEQ ID NO. 9)
Translation = Amino acid Translation of Consensus (SEQ ID NO.: 10)



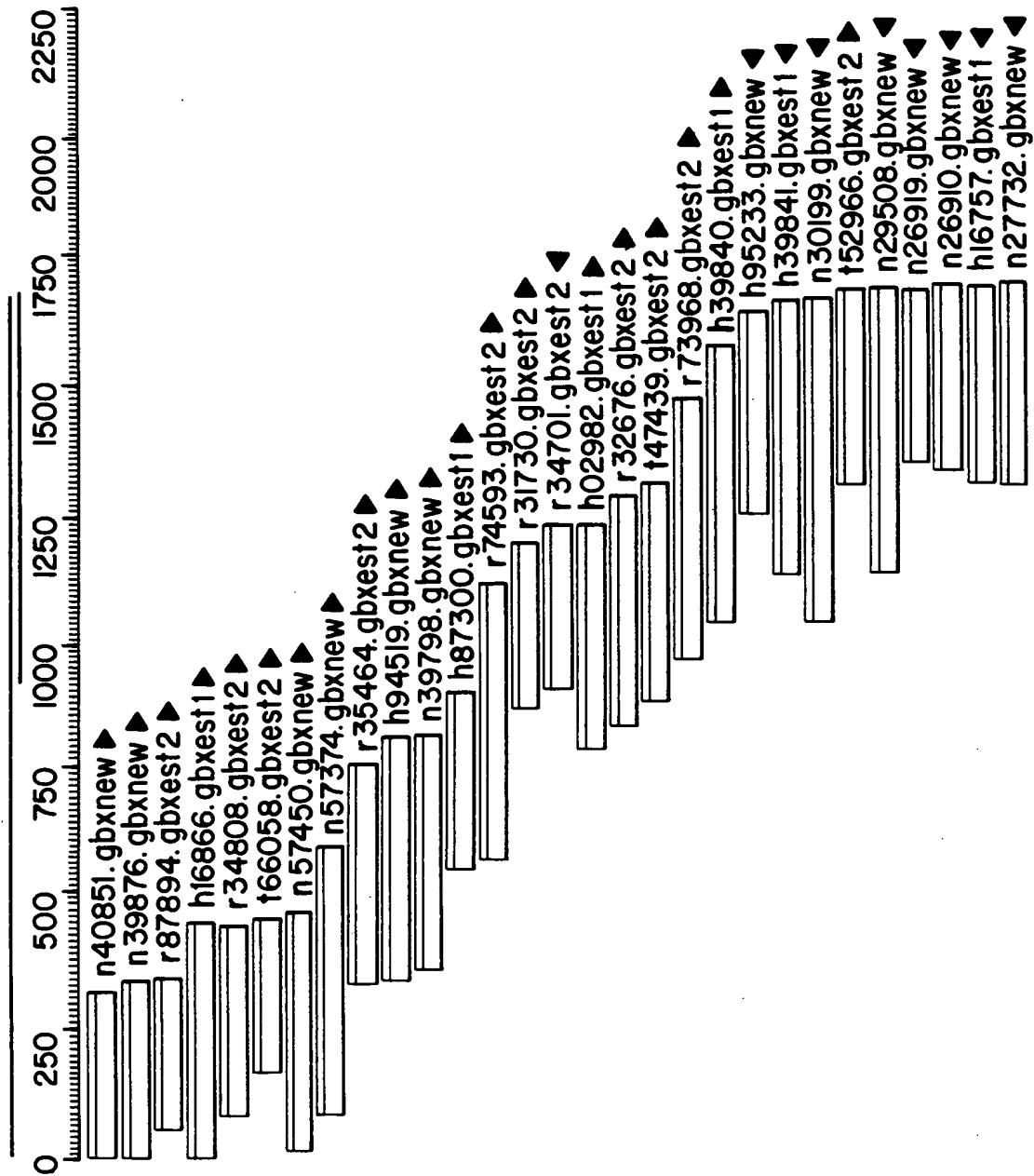
FIG. 4A





7/44

FIG. 4B



RECEIVED

OCT 24 2003

TECH CENTER 1600/2900



8/44

FIG. 4C

	1	50
Bikunin	..... GCGA CCTCCGCGCG TTGGGAGGTG	TAGCGCGGCT CTGAACGCGT
N40851	..... GCGA CCTCCGCGCG TTGGGAGGTG	TAGCGCGGCT CTGAACGCGT
N39876	..... GCGA CCTCCGCGCG TTGGGAGGTG	TAGCGCGGCT CTGAACGCGT
R87894
H16866	..... GGCAG CCTCCGCGCG TTGGGAGGTG	TAGCGCGCT CTGAACGGGN
R34808
T66058
N57450	T TAGCGCGGCT CTGAACGCNA
N57374
R35464
H94519
N39798
H87300
R74593
R31730
R34701
H02982
R32676
T47439
R73968
H39840
H95233
H39841
N30199
T52966
N29508
N26919
N26910
H16757
N27732

RECEIVED

OCT 24 2003

9/44

TECH CENTER 1600/2900



FIG. 4C (Cont.)

	51	100
Bikunin	GNA GGGCCG TTGAGTGTCTG CAGGCGGCAGA GGGCGCGAGT GAGGAGCAGA	
N40851	NGAGNGCCG TTGAGTGTCTG CAGGCGGCAGA GGGCGCGAGT GAGGAGCAGA	
N39876	GCA.GGGCCG TTGAGTGTCTG CAGGCGGCAGA GGGCGCGAGT GAGGAGCAGA	
R87894	..... TTGAGTGTCTG NAGGCGGCAGA GGGCGCGAGT GAGGAGCAGA	
H16866	..ANGGCCG TTGAGTGTCTG CAGGCGGCAGA GGGCN.GAGT GAGGAGCAGA	
R34808	G GAGGAGCAGA
T66058	
N57450	GAAGNGCCG TTGAGTGTCTG CAGGCGGCAGA GGGCGCGAGT GAGGAGCAGA	
N57374	AGA
R35464	
H94519	
N39798	
H87300	
R74593	
R31730	
R34701	
H02982	
R32676	
T47439	
R73968	
H39840	
H95233	
H39841	
N30199	
T52966	
N29508	
N26919	
N26910	
H16757	
N27732	



RECEIVED

10/44

OCT 24 2003

TECH CENTER 1600/2900

FIG. 4C (Cont.)

	101	150
Bikunin	CCCAGGCATC GCGCGCCGAG AAGNC GGGC GTCCCCACAC TGAAGGTCCG	
N40851	CCCAGGCATC GCGCGCCGAG AAGNC GGGC GTCCCCACAC TGAAGGTCCG	
N39876	CCCAGGCATC GCGCGCCGAG AAGNC GGGC NTCCCCACAC TGAAGGTCCG	
R87894	CCCAGGCATC GCGCGCCGAG AAGGCCGGGC GTCCCCACAC TGAAGGTCCG	
H16866	CCCAGGCATC GCGCGCCGAG AAGNC GGGC GTCCCCACAC TGAAGGTCCG	
R34808	CCCAGGCATC GCGCGCCGAG AAGNC GGGC GTCCCCACAC TGAAGGTCCG	
T66058	.....	.....
N57450	CCCAGGCATC GCGCGCCGAG AAGNC GGGC GTCCCCACAC TGAAGGTCCG	
N57374	CCCAGGCATC GCGCGCCGAG AAGNC GGGC GTCCCCACAC TGAAGGTCCG	
R35464	.....	.....
H94519	.....	.....
N39798	.....	.....
H87300	.....	.....
R74593	.....	.....
R31730	.....	.....
R34701	.....	.....
H02982	.....	.....
R32676	.....	.....
T47439	.....	.....
R73968	.....	.....
H39840	.....	.....
H95233	.....	.....
H39841	.....	.....
N30199	.....	.....
T52966	.....	.....
N29508	.....	.....
N26919	.....	.....
N26910	.....	.....
H16757	.....	.....
N27732	.....	.....



RECEIVED

OCT 24 2003

11/44

TECH CENTER 1600/2900

FIG. 4C (Cont.)

	151	200			
Bikunin	GAAAGGCGAC	TTCCGGGGGC	TTTGGCACCT	GGCGGACCCCT	CCCGGAGCGT
N40851	GAAAGGCGAC	TTCCGGGGGC	TTTGGCACCT	GGCGGACCCCT	CCCGGAGCGT
N39876	GAAAGGCGAC	TTCCGGGGGC	TTTGGCACCT	GGCGGACCCCT	CCCGGAGCGT
R87894	GAAAGGCGAC	TTCCGGGGGC	TTTGGCACCT	GGCGGACCCCT	CCCGGAGCGT
H16866	GAAAGGCGAC	TTCCGGGGGC	TTTGGCACCT	GGCGGACCCG.T	CCCGGAGCN.
R34808	GAAAGGCGAC	TTCCGGGGGC	TTTGGCACCT	GGCGGACCCCT	CCCGGAGCGT
T66058	.....	.....	.....	GGACCCCT	CCCGGAGCGT
N57450	GAAAGGCGAC	TTCCGGGGGC	TTTGGCACCT	GGCGGACCCCT	CCCGGAGCGT
N57374	GAAAGGCGAC	TTCCGGGGGC	TTTGGCACCT	GGCGGACCCCT	CCCGGAGCGT
R35464	.....	.....	.....	.....	.....
H94519	.....	.....	.....	.....	.....
N39798	.....	.....	.....	.....	.....
H87300	.....	.....	.....	.....	.....
R74593	.....	.....	.....	.....	.....
R31730	.....	.....	.....	.....	.....
R34701	.....	.....	.....	.....	.....
H02982	.....	.....	.....	.....	.....
R32676	.....	.....	.....	.....	.....
T47439	.....	.....	.....	.....	.....
R73968	.....	.....	.....	.....	.....
H39840	.....	.....	.....	.....	.....
H95233	.....	.....	.....	.....	.....
H39841	.....	.....	.....	.....	.....
N30199	.....	.....	.....	.....	.....
T52966	.....	.....	.....	.....	.....
N29508	.....	.....	.....	.....	.....
N26919	.....	.....	.....	.....	.....
N26910	.....	.....	.....	.....	.....
H16757	.....	.....	.....	.....	.....
N27732	.....	.....	.....	.....	.....



RECEIVED

OCT 24 2003

12/44

TECH CENTER 1600/2900

FIG. 4C (Cont.)

	201	250
Bikunin	CGGCACCTGA ACGCGAGGCG CTCCATTGCG CGTGCCTTTC	.AGGGGCTTC
N40851	CGGCACCTGA ACGCGAGGCG CTCCATTGCG CGTGCCTNTG	.AGGGGCTTC
N39876	CGGCACCTGA ACGCGAGGCG CTCCATTGCG CGTGCCTTTC	.AGGGGCTTC
R87894	CGGCACCTGA ACGCGAGGCG CTCCATTGCG CGTGCCTTTC	.AGGGGCTTC
H16866	.GGCACCTGA ACGCGAGGCG CTCCATTGCG CGTGCCTTTC	.AGGGGCTTC
R34808	CGGCACCTGA ACGCGAGGCG CTCCATTGCG CGTGCCTNTG GAGGGGCTTC	
T66058	CGGCACCTGA ACGCGAGGC. CTCCATTGCG .GTGCGTGTG NAGGGGCTTC	
N57450	CGGCACCTGA ACGCGAGGCG CTCCATTGCG CGTGCCTTTC	.AGGGGCTTC
N57374	CGGCACCTGA ACGCGAGGC. CTCCATTGC. CGTGCCTTNG .AGGGGCTTC	
R35464	.....
H94519	.....
N39798	.....
H87300	.....
R74593	.....
R31730	.....
R34701	.....
H02982	.....
R32676	.....
T47439	.....
R73968	.....
H39840	.....
H95233	.....
H39841	.....
N30199	.....
T52966	.....
N29508	.....
N26919	.....
N26910	.....
H16757	.....
N27732	.....

RECEIVED

OCT 24 2003



13/44

TECH CENTER 1600/2900

FIG. 4C (Cont.)

	251	300
Bikunin	CCGCACCT G ATCGCGAGAC	CCCAACGGCT GGTGG CGTC GC TG CGCG
N40851	CCGCACCT.G ATCGCGAGAC	CCCAACGGCT GGTGG CGTC GCCTG CGCG
N39876	CCGCACCT.G ATCGCGAGAC	CCCAACGGCT GGTGG CGTC GCCTG CGCG
R87894	CCGCACCT.G ATCGCGAGAC	CCCAACGGCT GGTNG CGTC GC TN CGCG
H16866	CCGCACCT.G ATCGCGAGAC	CCCAACGGCT GGTNG CGTC GC TGGCGCG
R34808	CCGCACCT.G ATCGCGAGAC	CCCAACGGCT GGTGGCGTC GC TG CGCG
T66058	CCGCACCT.G ATCGCGAGAC	CCCAACGGCT GGTGG CGTC GC TG CGCG
N57450	CCGCACCT.G ATCGCGAGAC	CCCAACGGCT GGTGG CGTC GCCTG CGCG
N57374	CCGGAACCTTG ATCGCGAGAC	CCCAACGGCT GGTGG CGTC GC TG CGCG
R35464	.....	.....
H94519	.....	.....
N39798	.....	.....
H87300	.....	.....
R74593	.....	.....
R31730	.....	.....
R34701	.....	.....
H02982	.....	.....
R32676	.....	.....
T47439	.....	.....
R73968	.....	.....
H39840	.....	.....
H95233	.....	.....
H39841	.....	.....
N30199	.....	.....
T52966	.....	.....
N29508	.....	.....
N26919	.....	.....
N26910	.....	.....
H16757	.....	.....
N27732	.....	.....



RECEIVED

OCT 24 2003

14/44

TECH CENTER 1600/2900

FIG. 4C (Cont.)

	301	350
Bikunin	TC TCGGCTG AGCT GGCCA TGGCGCANT	GTTGC GGGC T GAGGC GG
N40851	TC .TCGGCTG AGCT .GGNCA	TGTCG
N39876	TC .TCGGCTG AGCT .GGCCA	TGGCGCACT . G .TGC GGNGC T .GAGGC .G
R87894	TC .TCGGCTG AGCTTGGCCA	TGGCGCANT . GTTNC .GGGC T .NAGGC .GG
H16866	TTCTCGGCTG AGCT .GGCCA	TGGCGCANT . GTTGC .GNGC T .GAGGC .GG
R34808	TCTTCGGCTG AGCTGGGCCA	TGGCGCANTT GTTGC .GGGC T .GAGGC .GG
T66058	TC .TCGGCTG AGCT .GGCCA	TGGCGCANT . GTTGC .GNGC T .GAGGC .GG
N57450	TC .TCGGCTG AGCT .GGCCA	GGTGC .GGGC TTGAGGC .GG
N57374	TCCTCGGCTG AGCT .GGCCA	GGTGC GGNGC T .GAGGCCGG
R35464	.....	..... GGCCGG
H94519	.....	.....
N39798	.....	.....
H87300	.....	.....
R74593	.....	.....
R31730	.....	.....
R34701	.....	.....
H02982	.....	.....
R32676	.....	.....
T47439	.....	.....
R73968	.....	.....
H39840	.....	.....
H95233	.....	.....
H39841	.....	.....
N30199	.....	.....
T52966	.....	.....
N29508	.....	.....
N26919	.....	.....
N26910	.....	.....
H16757	.....	.....
N27732	.....	.....



RECEIVED

OCT 24 2003

15/44

TECH CENTER 1600/2900

FIG. 4C (Cont.)

	351	400
Bikunin	AC GG CG	TTTCTCG CC TGCTGGG A TCGCT GC T CCTCTCT
R87894	ACG.	
H16866	AC..CGNCGT	TTTTCTTCG. CCTTGCTGGG ATTGCGCTTGC TTCCCTNTCTG
R34808	ACGCGGNCG.	TTTTTTTCGN CCTTGCTGGG ATTGCG.TTG. TTNCTCTCTN
T66058	...CGGNCG.	TTTCTCG. CC.TGCTGGG A.TCGCT.GC T.CCTCTCT.
N57450	ANN.NGCCG.	...TTTCTCG. CC.TGCTGGG A.TCGCT.GC T.CCTCTCT.
N57374	AG..GGCCGG	...TTTCTCG. CCTTGCTGGG A.TCGCT.GC T.CCTCTCTG
R35464	.....GTCG.	...TTTCTCG. CCTGGCTGGG A.TCGCT.GC T.CCTCTCT.
H94519	.GCNGCGCG.	..TTNNTCG. CN.TGCTGGG A.TCGCT.GC A.CCTCTCT.
N39798	.....	.....CTGGG ANTCGCT.GC T.CCTCTCT.
H87300	.....	.....
R74593	.....	.....
R31730	.....	.....
R34701	.....	.....
H02982	.....	.....
R32676	.....	.....
T47439	.....	.....
R73968	.....	.....
H39840	.....	.....
H95233	.....	.....
H39841	.....	.....
N30199	.....	.....
T52966	.....	.....
N29508	.....	.....
N26919	.....	.....
N26910	.....	.....
H16757	.....	.....
N27732	.....	.....

RECEIVED

OCT 24 2003

16/44

TECH CENTER 1600/2900



FIG. 4C (Cont.)

	401	450
Bikunin	GGGG TCCTG G CGGCCGA CCGA GAACG CA GCA TCC ACGACTT CT	
H16866	GGGGTTCCTG GG CGGCCGA CCGA GAACG CA GCA TCC AAGAATTCTT	
R34808	GGGGTTC TG GGGNGGCCGA NCAGA GAACG CAAGCA TTC ACGA TTT	
T66058	GGGG TCCTG G CGGCCGA CCGA GAACG CA GCA TCC ACGANTT CT	
N57450	GGGG TCCTG G CGGCCGA CCGA GAACG CA GCA TCC ACGACTT CT	
N57374	GGGG TCCTG G CGGCCGA NCAGAAGAANG CA GCAATCC ANGAATTNCT	
R35464	GGGG TCCTG G CCGGCCGA CCGA GAACG CA GCA TCC ACGACTT CT	
H94519	GGGG TCGNG G CGGCCGA CCGA GAACG CA GCA TCC ACGACTT CT	
N39798	GGGG TCCTG G CGGCCGA CCGA GAACG CA GCA TCC ACGACTT CT	
H87300	.....
R74593	.....
R31730	.....
R34701	.....
H02982	.....
R32676	.....
T47439	.....
R73968	.....
H39840	.....
H95233	.....
H39841	.....
N30199	.....
T52966	.....
N29508	.....
N26919	.....
N26910	.....
H16757	.....
N27732	.....



RECEIVED

17/44

OCT 24 2003

TECH CENTER 1600/2900

FIG. 4C (Cont.)

	451	500
Bikunin	GCCTGGTGT CGAAGGT GG TGGGCAGATG CCGGG CCTC CATGCCTA G	
H16866	GCC	
T66058	TCCTGGTGT CGAAGG	
N57450	GCCTGGTGT. CGAAGGT.GG TGGGCAG	
N57374	GCCTGGTGT CGAAAGTTGG TGGGCANATT CCGGGGCCCTT CATGNCTAAG	
R35464	GCCTGGTGT. CGAAGGT.GG TGGGCAGATT CCGGG.CCTC CATGCCTA.G	
H94519	GCCTGGTGT. CGAAGGT.GG TGGGCAGATG CCGGG.CCTC CATGCCTA.G	
N39798	GCCTGGTGT. CGAAGGT.GG TGGGCAGATG CCGGG.CCTC CATGCCTA.G	
H87300	.....
R74593	.....
R31730	.....
R34701	.....
H02982	.....
R32676	.....
T47439	.....
R73968	.....
H39840	.....
H95233	.....
H39841	.....
N30199	.....
T52966	.....
N29508	.....
N26919	.....
N26910	.....
H16757	.....
N27732	.....

RECEIVED

OCT 24 2003

18/44

TECH CENTER 1600/2900



FIG. 4C (Cont.)

	501	550
Bikunin	G TGGT GGT ACAATGTCAC TGACGGATCC TGCCAGCTGT TTGTGT ATG	
N57374	GTTGGTTGGT ANAATGTNAA TTAANGATT TGCAACTGT TTGTGTNATT	
R35464	G.TGGT.GGT ACAATGTCAC TGACGGATCC TGCCAGCTGT TTGTGT.ATG	
H94519	G.TGGT.GGT ACAATGTCAC TGACGGATCC TGCCAGCTGT TTGTGT.ATG	
N39798	G.TGGT.GGT ACAATGTCAC TGACGGATCC TGCCAGCTGT TTGTGT.ATG	
H87300	.....
R74593	.....
R31730	.....
R34701	.....
H02982	.....
R32676	.....
T47439	.....
R73968	.....
H39840	.....
H95233	.....
H39841	.....
N30199	.....
T52966	.....
N29508	.....
N26919	.....
N26910	.....
H16757	.....
N27732	.....
	551	600
Bikunin	GGGGCTGTGA CGGAAACA GCAATAATTA CCTGACCAAG GA GGAGTGC	
N57374	GGGGCTNTTA AACGGAAANA .CAATAATNA CCTGACCAAA GAAGNAAT..	
R35464	GGGGCTGTGA ..CGGAAACA GCAATAATTA CCTGACCAAG GA.GGAGTGC	
H94519	GGGGCTGTGA ..CGGAAACA GCAATAATTA CCTGACCAAG GA.GGAGTGC	
N39798	GGGGCTGTGA ..CGGAAACA GCAATAATTA CCTGACCAAG GA.GGAGTGC	
H87300	GATTGGCAC AGGGGAAACA GCAATAATTA CCTGACCAAG GA.GGAGTNC	
R74593	..... GCAATAATTA CCTGACCAAG GA.GGAGTGC	
R31730	.....
R34701	.....
H02982	.....
R32676	.....
T47439	.....
R73968	.....
H39840	.....
H95233	.....
H39841	.....
N30199	.....
T52966	.....
N29508	.....
N26919	.....
N26910	.....
H16757	.....
N27732	.....



RECEIVED

19/44

OCT 24 2003

TECH CENTER 1600/2900

FIG. 4C (Cont.)

	601		650		
Bikunin	CTCAAGAAAT	GTGCCACTGT	CACAGAGAAT	GCCACGGGTG	ACCTGGCCAC
R35464	CTCAAGAAAT	GTGCCACTGT	CACAGAGAAT	GCCACGGGTG	ACCTGGCCAC
H94519	CTCAAGAAAT	GTGCCACTGT	CACAGAGAAT	GCCACGGGTG	ACCTGGCCAC
N39798	CTCAAGAAAT	GTGCCACTGT	CACAGAGAAT	GCCACGGGTG	ACCTGGCCAC
H87300	CTCAAGAAAT	GTGCCACTGT	CACAGAGAAT	GCCACGGGTG	ACCTGGCCAC
R74593	CTCAAGAAAT	GTGCCACTGT	CACAGAGAAT	GCCACGGGTG	ACCTGGCCAC
R31730	.....	.....	.....	.....	.....
R34701	.....	.....	.....	.....	.....
H02982	.....	.....	.....	.....	.....
R32676	.....	.....	.....	.....	.....
T47439	.....	.....	.....	.....	.....
R73968	.....	.....	.....	.....	.....
H39840	.....	.....	.....	.....	.....
H95233	.....	.....	.....	.....	.....
H39841	.....	.....	.....	.....	.....
N30199	.....	.....	.....	.....	.....
T52966	.....	.....	.....	.....	.....
N29508	.....	.....	.....	.....	.....
N26919	.....	.....	.....	.....	.....
N26910	.....	.....	.....	.....	.....
H16757	.....	.....	.....	.....	.....
N27732	.....	.....	.....	.....	.....
	651		700		
Bikunin	CAGCAGGAAT	GCAGCGGATT	CCTCTGTCCC	AAGTGCTCCC	AGAAGGCAGG
R35464	CAGCAGGAAT	GCAGCGGATT	CCTCTGTCCC	AAGTGCTCCC	AGAAGGCAGG
H94519	CAGCAGGAAT	GCAGCGGATT	CCTCTGTCCC	AAGTGCTCCC	AGAAGGCAGG
N39798	CAGCAGGAAT	GCAGCGGATT	CCTCTGTCCC	AAGTGCTCCC	AGAAGGCAGG
H87300	CAGCAGGAAT	GCAGCGGATT	CCTCTGTCCC	AAGTGCTCCC	AGAAGGCAGG
R74593	CAGCAGGAAT	GCAGCGGATT	CCTCTGTCCC	AAGTGCTCCC	AGAAGGCAGG
R31730	.....	.....	.....	.....	.....
R34701	.....	.....	.....	.....	.....
H02982	.....	.....	.....	.....	.....
R32676	.....	.....	.....	.....	.....
T47439	.....	.....	.....	.....	.....
R73968	.....	.....	.....	.....	.....
H39840	.....	.....	.....	.....	.....
H95233	.....	.....	.....	.....	.....
H39841	.....	.....	.....	.....	.....
N30199	.....	.....	.....	.....	.....
T52966	.....	.....	.....	.....	.....
N29508	.....	.....	.....	.....	.....
N26919	.....	.....	.....	.....	.....
N26910	.....	.....	.....	.....	.....
H16757	.....	.....	.....	.....	.....
N27732	.....	.....	.....	.....	.....

RECEIVED

OCT 24 2003

20/44

TECH CENTER 1600/2900



FIG. 4C (Cont.)

	701	750
Bikunin	ATTCT GAAG ACCACTCCAG CGATATGTT	CAACTAT G AAGAATACTG
R35464	ATTCTTGAAG ACCACTTCAG CGATATGTTT	CAANTATTGN AAGAATAATT
H94519	ATTCT.GAAG ACCACTCCAG CGATATGTT.	CAACTAT..G AAGAATACTG
N39798	ATTCT.GAAG ACCACTCCAG CGATATGTT.	CAACTAT..G AAGAATACTG
H87300	ATTCT.GAAG ACCACTCCAG CGATATGTT.	CAACTAT..G AAGAATACTG
R74593	ATTCT.GAAG ACCACTCCAG CGATATGTT.	CAACTAT..G AAGAATACTG
R31730	.....	.....
R34701	.....	.....
H02982	.....	.....
R32676	.....	.....
T47439	.....	.....
R73968	.....	.....
H39840	.....	.....
H95233	.....	.....
H39841	.....	.....
N30199	.....	.....
T52966	.....	.....
N29508	.....	.....
N26919	.....	.....
N26910	.....	.....
H16757	.....	.....
N27732	.....	.....

	751	800
Bikunin	CACCGCCAA CGCAGT CAC TGGGCC TTG CCGTG CAT CCTT CCCAC	
R35464	GCACCGNCAA CGNATT	
H94519	GCACCGCCAA CGCATT.CAC TGGGCC..TG C.GTG.CAT. CCTT.CCCAC	
N39798	.CACCGCCAA CGCAGT.CAC TGGGGCCTTG C.GTGGAAAT. CCTTTCCCAC	
H87300	.CACCGCCAA CGCAGTNAC TGGGCC.TTG C.GTGGCATN CCTT.CCCAC	
R74593	.CACCGCCAA CGCAGT.CAC TGGGCC.TTG CCGTG.CAT. CCTT.CCCAC	
R31730	.....	.....
R34701	.....	.....
H02982	.....	.....
R32676	.....	.....
T47439	.....	.....
R73968	.....	.....
H39840	.....	.....
H95233	.....	.....
H39841	.....	.....
N30199	.....	.....
T52966	.....	.....
N29508	.....	.....
N26919	.....	.....
N26910	.....	.....
H16757	.....	.....
N27732	.....	.....

RECEIVED

OCT 24 2003

21/44

TECH CENTER 1600/2900



FIG. 4C (Cont.)

	801	850
Bikunin	GCTGGTACTT T GACGTGGA GA GGAACTC CTG CAATAA CTTCATCTAT	
H94519	GCTGGTACTT T.GNCGT	
N39798	GCTGGNAATT TNGACGTTGA GAAGGAAAC	
H87300	GCTNGTACTT T.GACGTGGA GA.GGAACTC CTGGCAATAA CTTCATCTAT	
R74593	GCTGGTACTT T.GACGTGGA GA.GGAACTC CTG.CAATAA CTTCATCTAT	
R31730	.....
R34701	.....
H02982	..... GA GA.GGAACTC CTG.CAATAA CTTCATCTAT	
R32676	.....	..G ATTC..GGAA
T47439	.....
R73968	.....
H39840	.....
H95233	.....
H39841	.....
N30199	.....
T52966	.....
N29508	.....
N26919	.....
N26910	.....
H16757	.....
N27732	.....
	851	900
Bikunin	GGAGGCT GC CGGGCAAT AAGAACAG C TACCGCTC T GAGGAGGCCT	
H87300	GGAGGCTTGC CGGGCAATN AAGAACAGNT TACCGCTCTT TAGGAGGCCT	
R74593	GGAGGCT.GC CGGGCAAT. AAGAACAG.C TACCGCTC.T GAGGAGGCCT	
R31730	..... G.C TACCGCTC.T GAGGAGGCCT	
R34701	.....
H02982	GGNGGCT.GC CGGGG.AAT. AAGAACAC.NC TACCGCTC.T GAGGAGGCCT	
R32676	CGAGGA..GC CGGGCAAT. AAGAACAG.C TACCGCTC.T GAGGAGGCCT	
T47439	.....	..NGGCCT
R73968	.....
H39840	.....
H95233	.....
H39841	.....
N30199	.....
T52966	.....
N29508	.....
N26919	.....
N26910	.....
H16757	.....
N27732	.....

RECEIVED

OCT 24 2003

22/44

TECH CENTER 1600/2900



FIG. 4C (Cont.)

	901	950
Bikunin	GCA TGCTC CGCTGCTTCC GC	CA GCAGGA
H87300	.GCA.T.....	
R74593	.GCA.TGCTC CGCTGCTTCC GC.....	.CA.GCAGGA
R31730	.GCA.TGCTC CGCTGCTTCC GC.....	.CA.GCAGGA
R34701	.....TTCC GC.....	.CAAGCAGGA
H02982	.GCG.TGCTC CGCTGCTTCC GCTGTGTGTT CTCTTCCAGG	CCA.GCAGGA
R32676	.GCA.TGCTC CGCTGCTTCC GC.....	.CA.GCAGGA
T47439	TGCAGTGCTC CGCTGCTTCC GC.....	.CA.GCAGGA
R73968	.....
H39840	.....
H95233	.....
H39841	.....
N30199	.....
T52966	.....
N29508	.....
N26919	.....
N26910	.....
H16757	.....
N27732	.....

	951	1000
Bikunin	GAA TCCTCC CCTGCCCCTT GGCTCAAAGG TGGTGGTTC TGG CGGGGC	
R74593	GAA.TCCTCC CCTGCCCCTT GGCTCAAAGG TGGTGGTTC. TGGCGGGGGC	
R31730	GAA.TCCTCC CCTGCCCCTT GGCTCAAAGG TGGTGGTTC. TGG.CGGGGC	
R34701	AAANTCCTCC CCTCCCCCTT GGCTCAAAGG TGGTGGTTC TGG.CGGGGC	
H02982	GAA.TCCTCC CCTGCCCCTT GGCTCAAAGG TGGTGGTTC. TGG.CGGGGC	
R32676	GAA.TCCTCC CCTGCCCCTT GGCTCAAAGG TGGTGGTTC. TGG.CGGGGC	
T47439	GAA.TCCTCC CCTGCCCCTT GGCTCAAAGG TGGTGGTTC. TGG.CGGGGC	
R73968	.....	CGGGGC
H39840	.....
H95233	.....
H39841	.....
N30199	.....
T52966	.....
N29508	.....
N26919	.....
N26910	.....
H16757	.....
N27732	.....



RECEIVED

OCT 24 2003

23/44

TECH CENTER 1600/2900

FIG. 4C (Cont.)

1001

Bikunin	TGTT CGTGA	TGGTGTGAT	CC T CTTCC	TGGG AGCCT	CC ATGGTC
R74593	TGTT T CGTGA	TGGTGTGAT	CCTT..TTCC	TGGGGAGCNT	CC.ATGGTCT
R31730	TGTT .CGTGA	TGGTGTGAT	CC .T. CTTCC	TGGGGAGCCT	CC.ATGGTC.
R34701	TGTT .CGTGA	TGGTGTGAT	CCCTCCTTCC	CGGG .AGCCT	CCCATGGTCC
H02982	TGTT .CGTGA	TGGTGTGAT	CC .T. CTTCC	TGGG .AGCCT	CC.ATGGTN.
R32676	TGTT .CGTGA	TGGTGTGAT	CC .T. CTTCC	TGGG .AGCCT	CC.ATGGTC.
T47439	TGTT .CGTGA	TGGTGTGAT	CC .T. CTTCC	TGGG .AGCCT	CC.ATGGTC.
R73968	TGTT .CGTGA	TGGTGTGAT	CC .T. CTTCC	TGGG .AGCCT	CC.ATGGTC.
H39840	.....	.....	.....	.....	.....
H95233	.....	.....	.....	.....	.....
H39841	.....	.....	.....	.....	.....
N30199	.....	.....	.....	.....	.....
T52966	.....	.....	.....	.....	.....
N29508	.....	.....	.....	.....	.....
N26919	.....	.....	.....	.....	.....
N26910	.....	.....	.....	.....	.....
H16757	.....	.....	.....	.....	.....
N27732	.....	.....	.....	.....	.....

1050

Bikunin	TGTT CGTGA	TGGTGTGAT	CC T CTTCC	TGGG AGCCT	CC ATGGTC
R74593	TGTT T CGTGA	TGGTGTGAT	CCTT..TTCC	TGGGGAGCNT	CC.ATGGTCT
R31730	TGTT .CGTGA	TGGTGTGAT	CC .T. CTTCC	TGGGGAGCCT	CC.ATGGTC.
R34701	TGTT .CGTGA	TGGTGTGAT	CCCTCCTTCC	CGGG .AGCCT	CCCATGGTCC
H02982	TGTT .CGTGA	TGGTGTGAT	CC .T. CTTCC	TGGG .AGCCT	CC.ATGGTN.
R32676	TGTT .CGTGA	TGGTGTGAT	CC .T. CTTCC	TGGG .AGCCT	CC.ATGGTC.
T47439	TGTT .CGTGA	TGGTGTGAT	CC .T. CTTCC	TGGG .AGCCT	CC.ATGGTC.
R73968	TGTT .CGTGA	TGGTGTGAT	CC .T. CTTCC	TGGG .AGCCT	CC.ATGGTC.
H39840	.....	.....	.....	.....	.....
H95233	.....	.....	.....	.....	.....
H39841	.....	.....	.....	.....	.....
N30199	.....	.....	.....	.....	.....
T52966	.....	.....	.....	.....	.....
N29508	.....	.....	.....	.....	.....
N26919	.....	.....	.....	.....	.....
N26910	.....	.....	.....	.....	.....
H16757	.....	.....	.....	.....	.....
N27732	.....	.....	.....	.....	.....

1051

Bikunin	TACC TGAT	CCGGGTGGCA	CGGAGG AAC C	AGG AGCG	TGCCCTGC
R74593	TAC ..TGATT	CCGGGTGGCA	AGGAGG AAC C.	AGG AGCG	TGCCCTGC
R31730	TACC .TGAT.	CCGGGTGGCA	CGGAGGGAAC C.	AGGGAGCG	TGCCCTGC
R34701	TACCCTGAT.	CCGGGTGGCA	CGGAGG AAC CCAGG.	ANCG	TGCCCTGC
H02982	TACC .TGAT.	CCGGGTNGCA	CGGAGG AAC C.	AGGGAGCG	TGCCCTGC
R32676	TACC .TGAT.	CCGGGTGGCA	CGGAGG AAC C.	AGGGAGCG	TGCCCTGC
T47439	TACC .TGAT.	CCGGGTNGCA	CGGAGG AAC C.	AGG AGCG	TGCCCTGC
R73968	TACC .TGAT.	CCGGGTGGCA	CGGAGG AAC C.	AGG AGCG	TGCCCTGC
H39840	.....	.....	....GGG AAC C.	AGG AGCG	TGCCCTGC
H95233	.....	.....	.....	.....	.....
H39841	.....	.....	.....	.....	.....
N30199	.....	.....	GAGGAACC C.	ANG AGCT	TCCCCTGC
T52966	.....	.....	.....	.....	.....
N29508	.....	.....	.....	.....	.....
N26919	.....	.....	.....	.....	.....
N26910	.....	.....	.....	.....	.....
H16757	.....	.....	.....	.....	.....
N27732	.....	.....	.....	.....	.....

1100



RECEIVED

OCT 24 2003

24/44

TECH CENTER 1600/2900

FIG. 4C (Cont.)

	1101	1150
Bikunin	ACCG TCT G GAGCTCCGGA GATGACAAGG	AGCAGCTGG TGAAGAAC
R74593	ANCG .TCT.G GAGCTCCGGA GATGACAAGG	GNT
R31730	ACCG .TCTGG GAGCTCCGGA GATGACAAGG	GAGCAGCTGG GTGAAGAAC
R34701	ACCG .TCT.G GAGCTCCGGA GATGACAAGG	.AGCAGCTGG .TGAAGAAC
H02982	ACCG .TCTNG GAGCTCCGGA GATGACAAGG	.AGCAGCTGG .TGAAGAAC
R32676	ACCG .TCTGG GAGCTCCGGA GATGACAAGG	GAGCAGCTGG .TGAAGAAC
T47439	ACCG .TCT.G GAGCTCCGGA GATGACAAGG	.AGCAGCTGG .TGAAGAAC
R73968	ACCG .TCT.G GAGCTCCGGA GATGACAAGG	.AGCAGCTGG .TGAAGAAC
H39840	ACCGGTCT.G GAGCTCCGGA GATGACAAGG	.AGCAGCTGG .TGAAGAAC
H95233	.....	.....
H39841	.....	.....
N30199	ACCG .TCT.G GAGCTCCGGA GATNACAANG	.AGCAGCTGN .TGAAGAAC
T52966	.....	.....
N29508	.....	.....
N26919	.....	.....
N26910	.....	.....
H16757	.....	.....
N27732	.....	.....
	1151	1200
Bikunin	ACATATGT C CTGT GACCG CCCTGT CGC C AAGAGG A CT GGGGAA	
R31730	ACATATGTTC CTGTTGACCG NCCTGTTCGC C.AAGAGG.A TTGGGGGAA.	
R34701	ACATATGT.C CTGT .GACCG CCCTGT .CGC C.AAGAGG.A CT .GGGGAA.	
H02982	ACATATGT.C CTGT .GACCG NCCTGTTCGN C.AAGAGG.A CTNGGGGAA	
R32676	ACATATGTTC CTGTTGACCG CCCTGTTCGC C.AAGAGGGA NTGGGGGAA.	
T47439	ACATATGT.C CTGT .GACCG CCCTGT .CGC C.AAGAGG.A CT .GGGGAA.	
R73968	ACATATGT.C CTGT .GACCG CCCTGT .CGC C.AAGAGG.A CT .GGGGAA.	
H39840	ACATATGT.C CTGT .GACCG CCCTGT .CGC C.AAGAGG.A CT .NGGGAA.	
H95233	.....	.....
H39841	..... C. CCCTGT .CGC CCAAAAGG.A CT .GGGGAA.	
N30199	ACATATGT.C CTGT .GACCG CCCTNT .CGC C.AAGAGG.A CT .GGGNAAA	
T52966	.....	.....
N29508	..... CC. CCCTNT .CGC C.AAGAGG.A CT .GGG.AA.	
N26919	.....	.....
N26910	.....	.....
H16757	.....	.....
N27732	.....	.....



RECEIVED

OCT 24 2003

TECH CENTER 1600/2900

25/44

FIG. 4C (Cont.)

	1201	1250
Bikunin	GGGAGGGG AGACTAT G TGT GA GCT TTTTTT AA A TAGA GG	
R31730	.GGGAGGGG A	
R34701	.GGGAGGGG AGACTAT G. TGT.GA.GCT TTTTTT..AA A.TA	
H02982	GGGGAGGGG AGATTAT G. TGTTGA.GTT TTTTTT..AA ANTAG	
R32676	GGGGAGGGG AGANTATTGT TGTTGA.GNT TTTTTTAAA ATTAGGAGGG	
T47439	.GGGAGGGG AGACTAT G. TGT.GA.GCT TTTTTT..AA A.TAGA..GG	
R73968	.GGGAGGGG AGACTAT G. TGT.GA.GCT TTTTTT..AA A.TAGA..GG	
H39840	.GGGAGGGG AGACTAT G. TGT.GA.GCT TTTTTT..AA A.TAGA..GG	
H95233	.....
H39841	.GGGAGGGG AACNAT G. TGT.GAACCT TTTTTT.AAA A.TAGA..GG	
N30199	.GGGAGGNG AGACTAT G. TGT.AA.GCT TTTTTT..AA A.TAGA..GG	
T52966	.....
N29508	.GGGAGGGG AGACTA..G. TGT.GA.GCT TTTTTT..AA A.TAGA..GG	
N26919	.....
N26910	.....
H16757	.....
N27732	.....
	1251	1300
Bikunin	GATTGACTC GGATTTG A GT GATC A TTAGGG CT GAGGTCTGTT	
R32676	GNTTGANTTC GGGNTTTTNA GTTGATCCAT TTAGGGGGNT GAG	
T47439	GATTGACTC. GGATTTG.A GT.GATC.A. TTAGGG..CT GAGGTCTNTT	
R73968	GATTGACTC. GGATTTG.A GT.GATC.A. TTAGGG..CT GAGGTCTGTT	
H39840	GATTGACTC. GGATTTG.A GT.GATC.A. TTAGGG..CT GAGGTCTGTT	
H95233	..... A. TTAGGG..CT GAGGTCTGTT	
H39841	GATTGACTC. GGATTTG.A GT.GATC.A. TTAGGG..CT GAGGTCTGTT	
N30199	GATTGACTC. GGATTTGGA GT.GATC.A. TTAGGG..CT GAGGTCTGTT	
T52966	.....
N29508	GATTGACTC. GGATTTG.A GT.GATCNA. TTAGGG..CT GAGGTCTGTT	
N26919	.....
N26910	.....
H16757	.....
N27732	.....
	1301	1350
Bikunin	TCTCTGGGAG GTAGGACGGC TGCTTCC TG G TC TGGCA GGGATGGG	
T47439	TCTCTNGGAG GTAGGACGA	
R73968	TCTCTGGGAG GTAGGACGGC TGCTTCC.TG GGTCTTGGCA .GGGATGGGG	
H39840	TCTCTGGGAG GTAGGACGGC TGCTTCC.TG G.TC.TGGCA .GGGATGGG.	
H95233	NCTCTGGGAG NTAGGACGGC TGCCTCCCTG G.TC.TGGCA .GGGATGGG.	
H39841	TCNCTGGGAG GTAGGACGGC TGCTCCCCTG G.TC.TGGCA .GGGATGGG.	
N30199	TCTCTGGGAG GTAGGACGGC TGCTTCC.TG G.TC.TGGCA .GGGATGGG.	
T52966	..... .TC.TGGCA .GGGATGGG.	
N29508	TCTCTGGGAG GTAGGACGGC TGCTTCA.TG G.TC.TGGCA .GGGATGGG.	
N26919	.....
N26910	.....
H16757	..... G.G.TC.TGGCA .GGGATGGG.	
N27732	..... CCCTG GGTCTGNCA AGGNATGGGG	



RECEIVED

OCT 24 2003

26/44

TECH CENTER 1600/2900

FIG. 4C (Cont.)

	1351	1400
Bikunin	TTTG CTTTG G AAATCCTC T AGGAGGCT CCTCCT CGC ATGG CC TG	
R73968	TTTG.CTTTG GGAAATCCTC TTNGGAGGCT CCTCCTCGC ATGGGCCTTG	
H39840	TTTG.CTTTG GAGAATCCTC T.ANGAGGCT CCTCCT CGC ATGG CC TG	
H95233	TTTG.CTTTG G AAATCCTC T AGGAGGCT CCTCCT CGC ATGG CC TG	
H39841	TTTG.CTTTG G AAANCCNC T AGGAGGCT CCTCCT CGC ATGG CC TG	
N30199	TTTG.CTTTG G AAATCCTC T AGGAGGCT CCTCCTCGC ATGG CC TG	
T52966	TTTG.CTTTG G AAATCCTC T AGGAGGCT CCTCCT CGC ATGG CC TG	
N29508	TTTG.CTTTG G AAATCCTC T AGGAGGCT CCTCCT CGC ATGG CC TG	
N26919	..... GAGGCT CCTCCT CGC ATGG CC TG	
N26910	.....CTTT GNAAATCCTC T AGGAGGCT CCTCCT CGC ATGG CC TG	
H16757	TTTGCTTTG G AAANCCNC T AGGAGGCT CCTCCT CGC ATGG CC TG	
N27732	TTTG.CTTTG G AAATCCTC TTAGGAGGCT CCTCCT CGC ATGG CC TG	
	1401	1450
Bikunin	CAGT CT GG CAGCAG CCC CGAGTTGTTT CC TCGCTG ATC GATTTC	
R73968	CAGT.CTNGG CAGCAGCCCC CGAGTTTTTT TCCTTCGCTG ATCCGATTTC	
H39840	CAGT.CT.GG CAGCAG CCC CGAGTTGTTT .CC.TCGCTG ATC.GATTTC	
H95233	CAGTTCT..G CAGCAG CCC CGAGTTGTTT .CC.TCGCTG ATC.GATTTC	
H39841	CAGT.CT.GG CAGCAG CCC CGAGTTGTTN .CC.TCGCTG ATC.GATNTC	
N30199	CAGT.CT.GG CAGCAG CCC CGAGTTGTTT .CC.TCGCTG ATC.GATTTC	
T52966	CAGT.CT.GG CAGCAG..CC CGAGTTGTTT .CC.TCGCTG ATC.GATTTC	
N29508	CAGT.CT..G CAGCAG CCC CGAGTTGTTT .CC.TCGCTG ATC.GATTTC	
N26919	CAGT.CTTGG CAGCAG CCC CGAGTTGTTT .CC.TCGCTG ANC.GATTTC	
N26910	CAGT.CT..G CAGCAG CCC CGAGTTGTTT .CC.TCGCTG ATCGGATTTC	
H16757	CAGTNCT.GG CAGCAGACCC CGAGTTGTTT .CC.TCGCTG ATC.GATTTC	
N27732	CAGT.CT.GG CAGCAG CCC CGAGTTGTTT .CC.TCGCTG ANC.GATTTC	
	1451	1500
Bikunin	TTT CCTCCA GGTAG AGT TTTC TTTG CTTATGTTGA ATTCCATTGC	
R73968	TTTCCCTCCA GGTAGAATT TTTCTTTT CTTATGTTGA ATTCCATTGC	
H39840	TTT.CCTCCA GGTAG..AGT TTTC.TTTG. CTTATGTTGA ATTCCATTGC	
H95233	TTT.CCTCCA GGTAG..AGT TTTC.TTTG. CTTATGTTGA ATTCCATTGC	
H39841	TTT.CCCCCA GGTAG..AGT TTTC.TTTG. CTTATGTTGA ANTCCATTGC	
N30199	TTT.CCTCCA GGTAG..AGT TTTC.TTTG. CTTATGTTGA ATTCCATTGC	
T52966	TTT.CCTCCA GGTAG..AGT TTTC.TTTG. CTTATGTTGA ATTCCATTGC	
N29508	TTT.CCTCCA GGTAG..AGT TTTC.TTTG. CTTATGTTGA ATTCCATTGC	
N26919	TTT.CCNCCA GGTAG..AGT TTTC.TTTG. CTTATGTTGA ATTCCATTGC	
N26910	TTT.CCTCCA GGTAG..AGT TTTC.TTTG. CTTATGTTGA ATTCCATTGC	
H16757	TTTACCCCCA GGTAG..AGT TTTCCTTTGN CTTATGTTGA ATTCCATTGC	
N27732	TTT.CCTCCA GGTAG..AGT TTTC.TTTG. CTTATGTTGA ATTCCATTGC	



RECEIVED

OCT 24 2003

27/44.

TECH CENTER 1600/2900

FIG. 4C (Cont.)

	1501	1550
Bikunin	CTCTTT CT CATCACAGAA GTGATGTTGG	AATCGTTCT TTTGTTT GT
H39840	CTCTTT CT CATCACAGAA GTGATGTTGG	AATCGTTCT TTTGTTTGT
H95233	CTCTTT CT CATCACAGAA GTGATGTTGG	AATCGTTCT TTTGTTT GT
H39841	CTCTTT CT CATCACAGAA GTGATGTTGG	AATCGTTCT TTTGTTT GT
N30199	CTCTTT CT CATCACAGAA GTGATGTTGG	AATCGTTCT TTTGTTT GT
T52966	CTCTTT CT CATCACAGAA GTGATGTTGG	AATCGTTCT TTTGTTT GT
N29508	CTCTTT CT CATCACAGAA GTGATGTTGG	AATCGTTCT TTTGTTT GT
N26919	CTCTTT CN CATCACAGAA GTGATGTTGG	AATCGTTCT TTTGTTT GT
N26910	CTCTTT CT CATCACAGAA GTGATGTTGG	AATCGTTCT TTTGTTT GT
H16757	CTCTTTACT CATCACAGAA GTGATGTTGG	AATCGTTCT TTTGTTT GT
N27732	CTCTTT CT CATCACAGAA GTGATGTTGG	AATCGTTCT TTTGTTT GT
	1551	1600
Bikunin	CTGATTATG G TTTTTTT AAGTATAAAC AAAAGTTTT TATTAGCATT	
H39840	CTGATTATG GGTTTTTTT AAGTAT	
H95233	CTGATTATG G..TTTTTTT AAGTATAAAC AAAAGTTTT TATTAGCATT	
H39841	CTGATTATG G..TTTTTTT AAGTATAAAC AAAAGTTTT TATTAGCATT	
N30199	CTGATTATG G..TTTTTTT AAGTATAAAC AAAAGTTTT TATTAGCATT	
T52966	CTGATTATG G..TTTTTTT AAGTATAAAC AAAAGTTTT TATTAGCATT	
N29508	CTGATTATG G..TTTTTTT AAGTATAAAC AAAAGTTTT TATTAGCATT	
N26919	CTGATTATG G..TTTTTTT AAGTNTAAC AAAAGTTTT TATTAGCATT	
N26910	CTGATTATG G..TTTTTTT AAGTATAAAC AAAAGTTTT TATTAGCATT	
H16757	CTGATTATG G..TTTTTTT AAGTATAAAC AAAAGTTTT TATTAGCATT	
N27732	CTGATTATG G..TTTTTTT AAGTATAAAC AAAAGTTTT TATTAGCATT	
	1601	1650
Bikunin	CTGAAAGAAG GAAAGTAAAAA TGTACAAGTT TAATAAAAAG GGGCCTTCCC	
H95233	CTGAAAGAAG GAAAGTAAAAA TGTACAAGTT TAATAAAA	
H39841	CTGAAAGAAG GAAAGTAAAAN TGTACAAGTT TAATAAAAAG GGGCCTTCCC	
N30199	CTGAAAGAAG GAAAGTAAAAA TGTACAAGTT TAATAAAAAG GGGCCTTCCC	
T52966	CTGAAAGAAG GAAAGTAAAAA TGTACAAGTT TAATAAAAAG GGGCCTTCCC	
N29508	CTGAAAGAAG GAAAGTAAAAA TGTACAAGTT TAATAAAAAG GGGCCTTCCC	
N26919	CTGAAAGAAG GAAAGTAAAAA TGTACAAGTT TAATAAAAAG GGGCCTTCCC	
N26910	CTGAAAGAAG GAAAGTAAAAA TGTACAAGTT TAATAAAAAG GGGCCTTCCC	
H16757	CTGAAAGAAG GAAAGTAAAAA TGTACAAGTT TAATAAAAAG GGGCCTTCCC	
N27732	CTGAAAGAAG GAAAGTAAAAA TGTACAAGTT TAATAAAAAG GGGCCTTCCC	
	1651	1689
Bikunin	CTTTAG AAT AAAAAAAAAA AAAAAAAAAA AAAAAAAAA	
H39841	CTTTAA.	
N30199	CTTTAG AAT AAA	
T52966	CTTTAGGAAT NAAAAAANAAA AAGGGTG	
N29508	CTTTAG AAT AAATTCAGC ATGTGCTTTC AA	
N26919	CTTTAG AAT AAAAAAAAAA AAAAAAAAAA A	
N26910	CTTTAG AAT AAATTCAGC ATGTGCTTTC AAAAAAA	
H16757	CTTTAG AAT AAAAAAAAAA AAAAAAAAAA AAAAAAA	
N27732	CTTTAG AAT AAAAAAAAAA AAAAAAAAAA AAAAAAAAA	



RECEIVED

OCT 24 2003

TECH CENTER 1600/2900

28/44

FIG. 4D

EST consens MLRAEADGVS RLLGSLLL SG VLAADRERSI HDFCLVSKVV GRCRASMPRW 50
EST consens WYNVTDGSCQ LFVYGGCDGN SNNYLTKEEC LKKCATVTEN ATGDLATSRN 100
EST consens AADSSVPSAP RRQDSEDHSS DMFNYEEYCT ANAVTGPCRA SFPRWYFDVE 150
EST consens RNSCNNFIYG GCRGNKNSYR SEEACMLRCF RQQENPPLPL GSKVVVLAGL 200
EST consens FVMVLILFLG ASMVYLIRVA RRNQERALRT VWSSGDDKEQ LVKNTYVL 248



RECEIVED

OCT 24 2003

29/44

TECH CENTER 1600/2900

FIG. 4F

CDNA	GCACGAGTTG	GGAGGTGTTAG	CGCGGCTCTG	AACCGCGCTGA	GGGCCGTTGA	50
CDNA	GTGTCGCAGG	CGCGGAGGGC	GCGAGTGAGG	AGCAGACCCA	GGCATCGCGC	100
CDNA	GCCGAGAAGG	CCGGGCGTCC	CCACACTGAA	GGTCCGGAAA	GGCGACTTCC	150
CDNA	GGGGGCTTTG	GCACCTGGCG	GACCCCTCCCG	GAGCGTCGGC	ACCTGAACGC	200
CDNA	GAGGCGCTCC	ATTGCGCGTG	CGCGTTGAGG	GGCTTCCCGC	ACCTGATCGC	250
CDNA	GAGACCCCAA	CGGCTGGTGG	CGTCGCCTGC	GGCTCTCGGC	TGAGCTGGCC	300
CDNA	ATGGCGCAGC	TGTGCGGGCT	GAGGCGGAGC	CGGGCGTTTC	TCGCCCTGCT	350
translation	M A Q L	C G L	R R S	R A F L	A L L	-11
CDNA	GGGATCGCTG	CTCCTCTCTG	GGGTCCCTGGC	GGCCGACCGA	GAACGCAGCA	400
translation	G S L	L L S G	V L A	A D R	E R S I	7
CDNA	TCCACGACTT	CTGCCTGGTG	TCGAAGGTGG	TGGGCAGATG	CCGGGCCTCC	450
translation	H D F	C L V	S K V V	G R C	R A S	23
CDNA	ATGCCTAGGT	GGTGGTACAA	TGTCACTGAC	GGATCCTGCC	AGCTGTTGT	500
translation	M P R W	W Y N	V T D	G S C Q	L F V	40
CDNA	GTATGGGGC	TGTGACGGAA	ACAGCAATAA	TTACCTGACC	AAGGAGGAGT	550
translation	Y G G	C D G N	S N N	Y L T	K E E C	57
CDNA	GCCTCAAGAA	ATGTGCCACT	GTCACAGAGA	ATGCCACGGG	TGACCTGGCC	600
translation	L K K	C A T	V T E N	A T G	D L A	73
CDNA	ACCAGCAGGA	ATGCAGCGGA	TTCCCTCTGTC	CCAAGTGCTC	CCAGAAGGCA	650
translation	T S R N	A A D	S S V	P S A P	R R Q	90
CDNA	GGATTCTGAA	GACCACTCCA	GCGATATGTT	CAACTATGAA	GAATACTGCA	700
translation	D S E	D H S S	D M F	N Y E	E Y C T	107
CDNA	CCGCCAACGC	AGTCACTGGG	CCTTGCCGTG	CATCCTTCCC	ACGCTGGTAC	750
translation	A N A	V T G	P C R A	S F P	R W Y	123
CDNA	TTTGACGTGG	AGAGGAACTC	CTGCAATAAC	TTCATCTATG	GAGGCTGCCG	800
translation	F D V E	R N S	C N N	F I Y G	G C R	140
CDNA	GGGCAATAAG	AACAGCTACC	GCTCTGAGGA	GGCCTGCATG	CTCCGCTGCT	850
translation	G N K	N S Y R	S E E	A C M	L R C F	157
CDNA	TCCGCCAGCA	GGAGAATCCT	CCCCTGCCCC	TTGGCTAAA	GGTGGTGGTT	900
translation	R Q Q	E N P	P L P L	G S K	V V V	173
CDNA	CTGGCGGGGC	TGTCGTGAT	GGTGTGATC	CTCTTCTGG	GAGCCTCCAT	950
translation	L A G L	F V M	V L I	L F L G	A S M	190
CDNA	GGTCTACCTG	ATCCGGGTGG	CACGGAGGAA	CCAGGAGCGT	GCCCTGCGCA	1000
translation	V Y L	I R V A	R R N	Q E R	A L R T	207
CDNA	CCGTCTGGAG	CTCCGGAGAT	GACAAGGAGC	AGCTGGTGAA	GAACACATAT	1050
translation	V W S	S G D	D K E Q	L V K	N T Y	223
CDNA	GTCCTGTGAC	CGCCCTGTG	CCAAGAGGAC	TGGGAAAGGG	AGGGGAGACT	1100
translation	V L *					225



RECEIVED

OCT 24 2003

30/44

TECH CENTER 1600/2900

FIG. 4E

cDNA	ACC 3
translation	T -47
cDNA TGATCGCGAG ACCCCAACGG CTGGTGGCGT CGCCTGCGCG TCTCGGCTGA 53	
translation . S R D P N G W W R R L R V S A E -30	
cDNA GCTGGCCATG GCGCAGCTGT GCGGGCTGAG GCGGAGCCGG GCGTTTCTCG 103	
translation L A M A Q L C G L R R S R A F L A-13	
cDNA CCCTGCTGGG ATCGCTGCTC CTCTCTGGGG TCCTGGCGGC CGACCGAGAA 153	
translation L L G S L L L S G V L A A D R E 4	
cDNA CGCAGCATTCC ACGACTTCTG CCTGGTGTG AAGGTGGTGG GCAGATGCCG 203	
translation R S I H D F C L V S K V V G R C R 21	
cDNA GGCCTCCATG CCTAGGTGGT GGTACAATGT CACTGACGGA TCCTGCCAGC 253	
translation A S M P R W W Y N V T D G S C Q L 38	
cDNA TGTTTGTGTA TGGGGGCTGT GACGGAAACA GCAATAATT A CCTGACCAAG 303	
translation F V Y G G C D G N S N N Y L T K 54	
cDNA GAGGAGTGCC TCAAGAAAATG TGCCACTGTC ACAGAGAAATG CCACGGGTGA 353	
translation E E C L K K C A T V T E N A T G D 71	
cDNA CCTGGCCACC AGCAGGAATG CAGCGGATTG CTCTGTCCCA AGTGTCTCCA 403	
translation L A T S R N A A D S S V P S A P R 88	
cDNA GAAGGCAGGA TTCTGAAGAC CACTCCAGCG ATATGTTCAA CTATGAAGAA 453	
translation R Q D S E D H S S D M F N Y E E 104	
cDNA TACTGCACCG CCAACCGAGT CACTGGGCCT TGCCGTGCAT CCTTCCCACG 503	
translation Y C T A N A V T G P C R A S F P R 121	
cDNA CTGGTACTTT GACGTGGAGA GGAACCTCTG CAATAACTTC ATCTATGGAG 553	
translation W Y F D V E R N S C N N F I Y G G 138	
cDNA GCTGCCGGGG CAATAAGAAC AGCTACCGCT CTGAGGAGGC CTGCATGCTC 603	
translation C R G N K N S Y R S E E A C M L 154	
cDNA CGCTGCTTCC GCCAGCAGGA GAATCCTCCC CTGCCCTTG GCTCAAAGGT 653	
translation R C F R Q Q E N P P L P L G S K V 171	
cDNA GGTGGTTCTG GCGGGGCTGT TCGTGATGGT GTTGATCCTC TTCCCTGGGAG 703	
translation V V L A G L F V M V L I L F L G A 188	
cDNA CCTCCATGGT CTACCTGATC CGGGTGGCAC GGAGGAACCA GGAGCGTGCC 753	
translation S M V Y L I R V A R R N Q E R A 204	
cDNA CTGCGCACCG TCTGGAGCTT CGGAGATGA	782
translation L R T V W S F G D	213



RECEIVED

OCT 24 2003

31/44

TECH CENTER 1600/2900

FIG. 4F (Cont.)

CDNA	ATGTGTGAGC	TTTTTTAAA	TAGAGGGATT	GACTCGGATT	TGAGTGATCA	1150
CDNA	TTAGGGCTGA	GGTCTGTTTC	TCTGGGAGGT	AGGACGGCTG	CTTCCTGGTC	1200
CDNA	TGGCAGGGAT	GGGTTTGCTT	TGGAAATCCT	CTAGGAGGCT	CCTCCTCGCA	1250
CDNA	TGGCCTGCAG	TCTGGCAGCA	GCCCCGAGTT	GTTCCTCGC	TGATCGATTT	1300
CDNA	CTTTCCCTCCA	GGTAGAGTTT	TCTTGCTTA	TGTTGAATTG	CATTGCCTCC	1350
CDNA	TTTTCTCNAT	CACAGAAGTG	ATGTTGGAAT	CGTTTCTTTT	GTTCGTCTGA	1400
CDNA	TTTATGGTTT	TTTAAGTAT	AAACAAAAGT	TTTTTATTAG	CATTCTGAAA	1450
CDNA	GAAGGAAAGT	AAAATGTACA	AGTTTAATAA	AAAGGGGCCT	TCCCCCTTTAG	1500
CDNA	AATAAAATTTC	CAGCATGTTG	CTTTCAAAAA	AAAAAAAAAA	AAAA	1550

OCT 24 2003

TECH CENTER 1600/2900

32/44



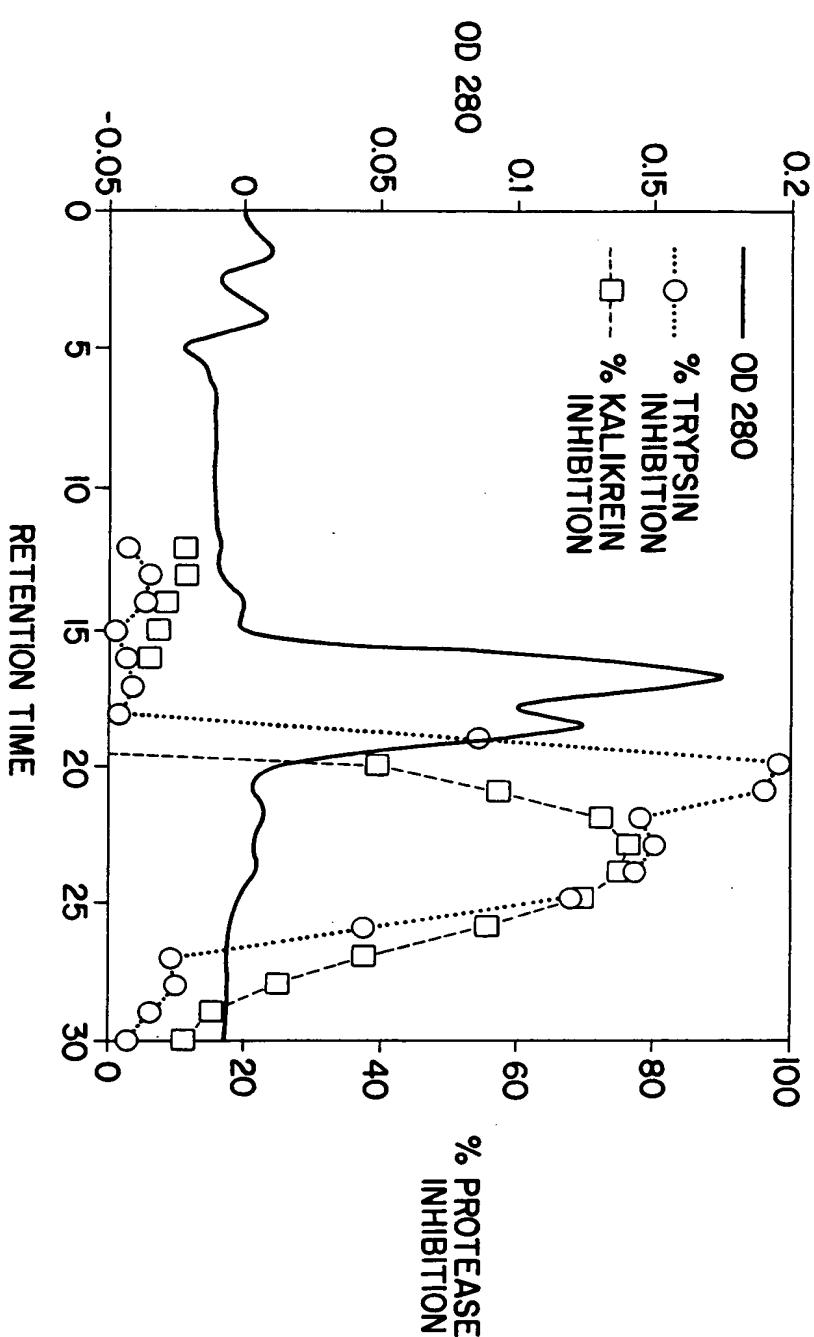
FIG. 4G

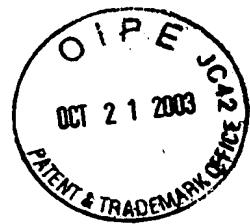
EST consens	MLR AEADGVSRL GSLLLSGVLA	-1
PCR clone	MAQLCGL RRSRAFLALL GSLLLSGVLA	-1
λ cDNA clone	MAQLCGL RRSRAFLALL GSLLLSGVLA	-1
EST consens	ADRERSIHDF CLVSKVVGRC RASMPRWYN VTDGSCQLFV YGGCDGNSNN	50
PCR clone	ADRERSIHDF CLVSKVVGRC RASMPRWYN VTDGSCQLFV YGGCDGNSNN	50
λ cDNA clone	ADRERSIHDF CLVSKVVGRC RASMPRWYN VTDGSCQLFV YGGCDGNSNN	50
EST consens	YLTKEECLKK CATVTENATG DLATSRNAAD SSVPSAPRRQ DSEDHSSDMF	100
PCR clone	YLTKEECLKK CATVTENATG DLATSRNAAD SSVPSAPRRQ DSEDHSSDMF	100
λ cDNA clone	YLTKEECLKK CATVTENATG DLATSRNAAD SSVPSAPRRQ DSEDHSSDMF	100
EST consens	NYEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE	150
PCR clone	NYEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE	150
λ cDNA clone	NYEEYCTANA VTGPCRASFP RWYFDVERNS CNNFIYGGCR GNKNSYRSEE	150
EST consens	ACMLRCFRQQ ENPPLPLGSK <u>VVVLAGLFVM VLILFLGASM VYLIRVARRN</u>	200
PCR clone	ACMLRCFRQQ ENPPLPLGSK <u>VVVLAGLFVM VLILFLGASM VYLIRVARRN</u>	200
λ cDNA clone	ACMLRCFRQQ ENPPLPLGSK <u>VVVLAGLFVM VLILFLGASM VYLIRVARRN</u>	200
EST consens	QERALRTVWS SGDDKEQLVK NTYVL	225
PCR clone	QERALRTVWS FGD	213
λ cDNA clone	QERALRTVWS SGDDKEQLVK NTYVL	225



33/44

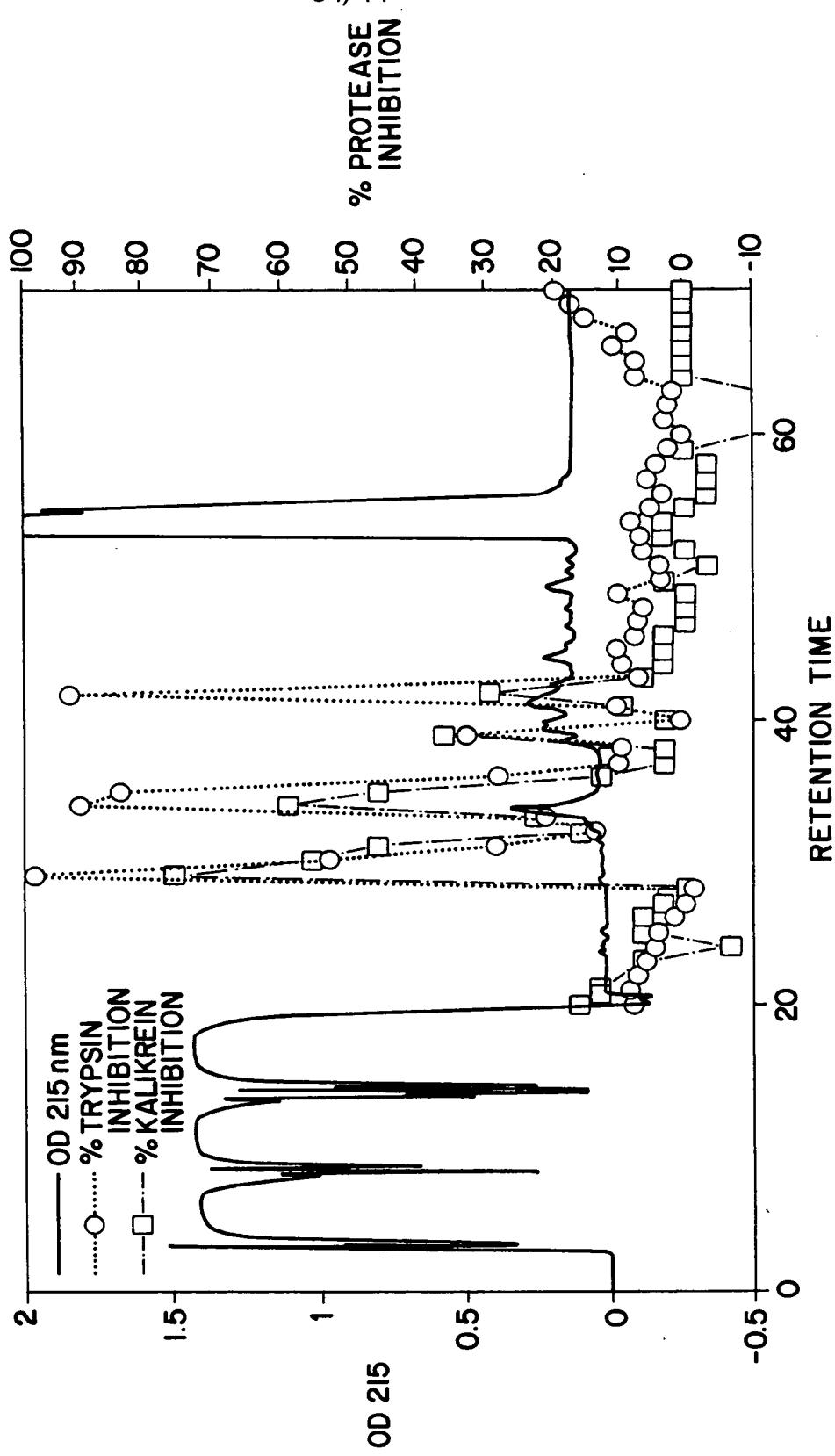
FIG. 5





34/44

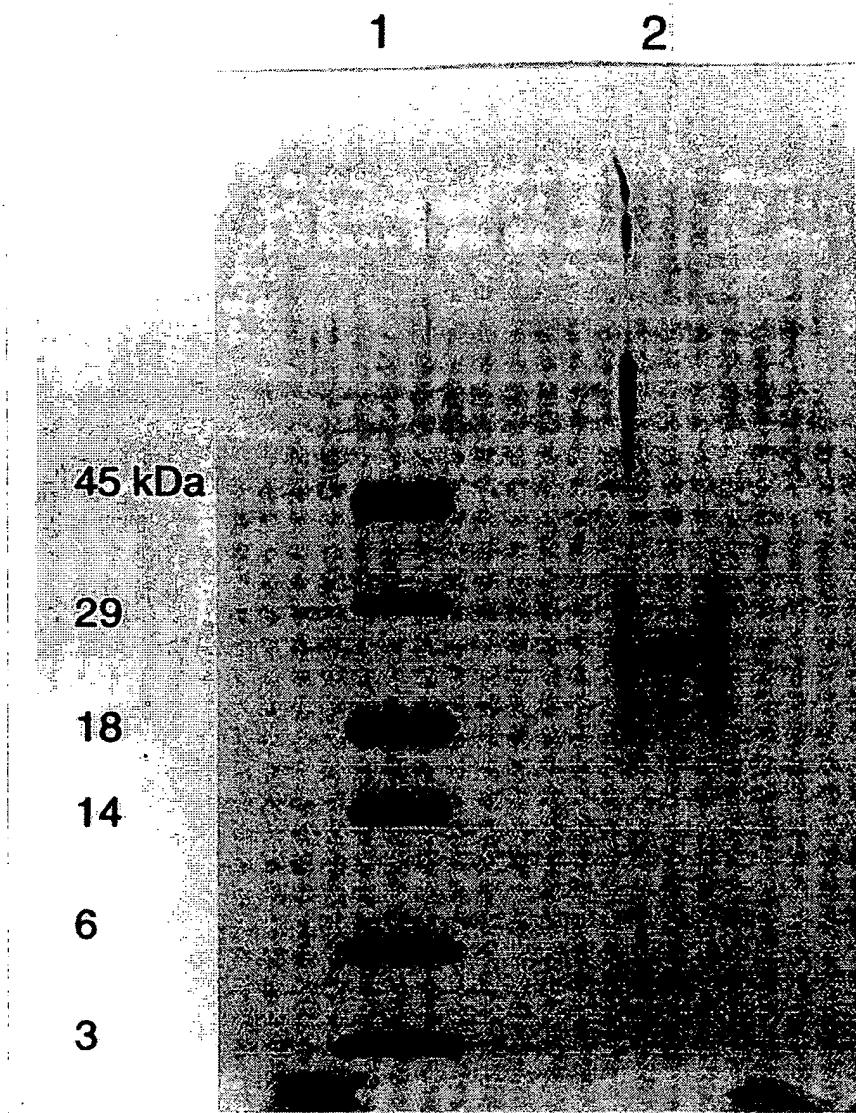
FIG. 6

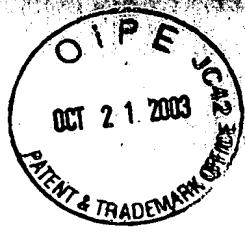




35/44

FIG. 7





36/44

FIG. 8A

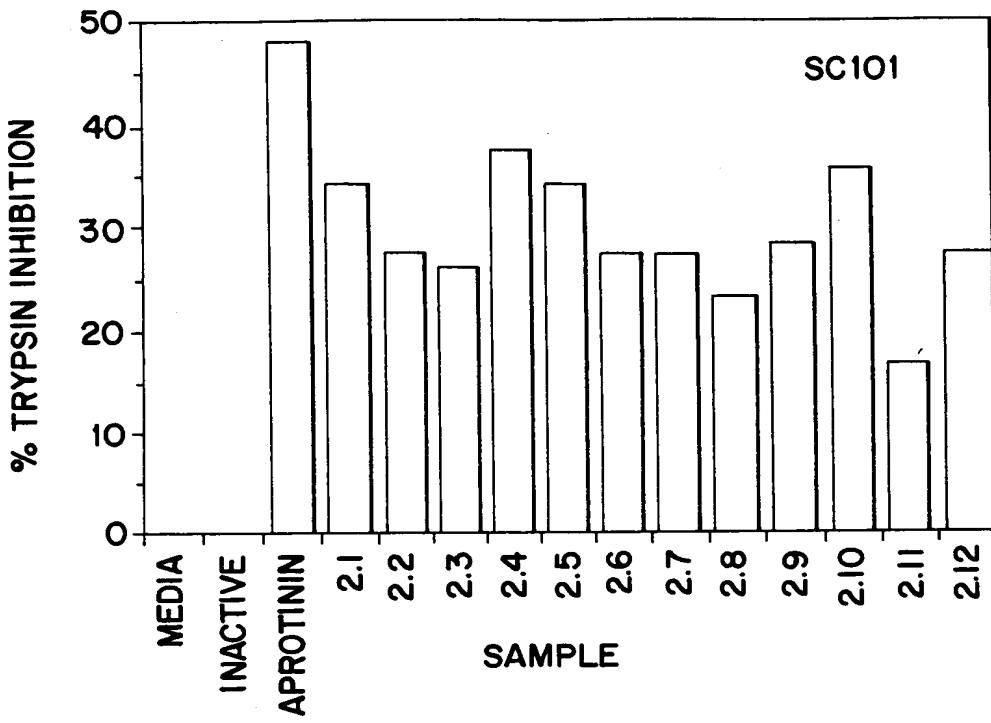
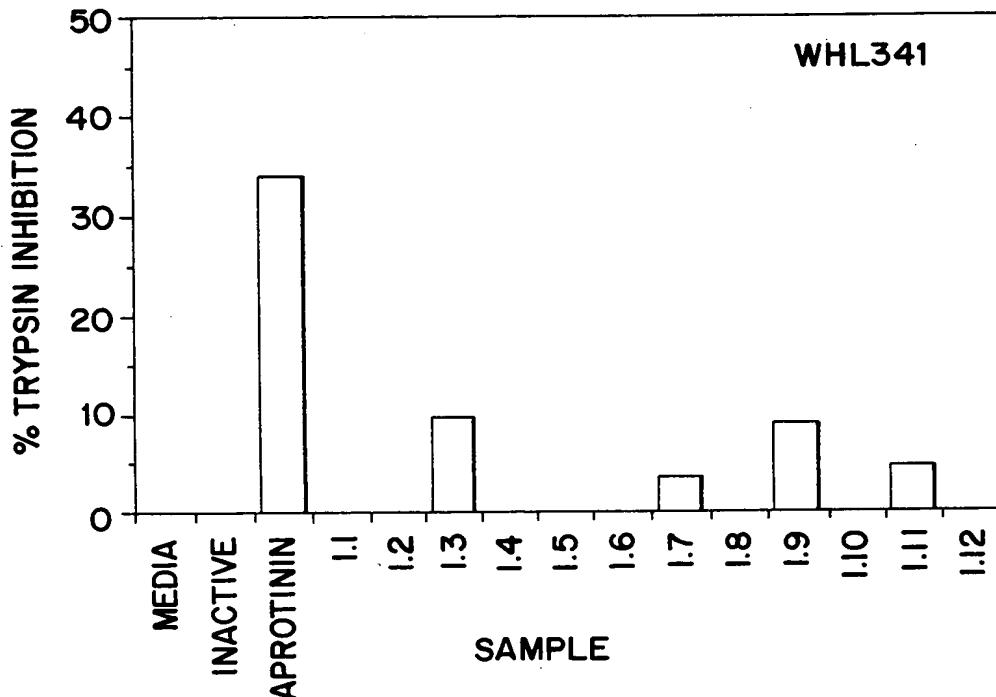


FIG. 8B

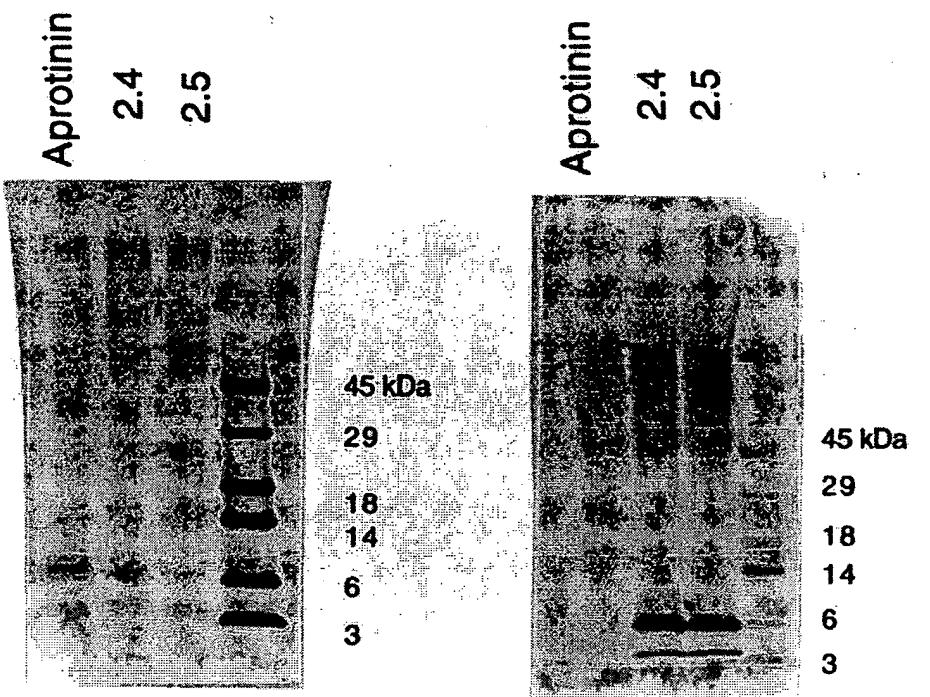




37/44

FIG. 9A

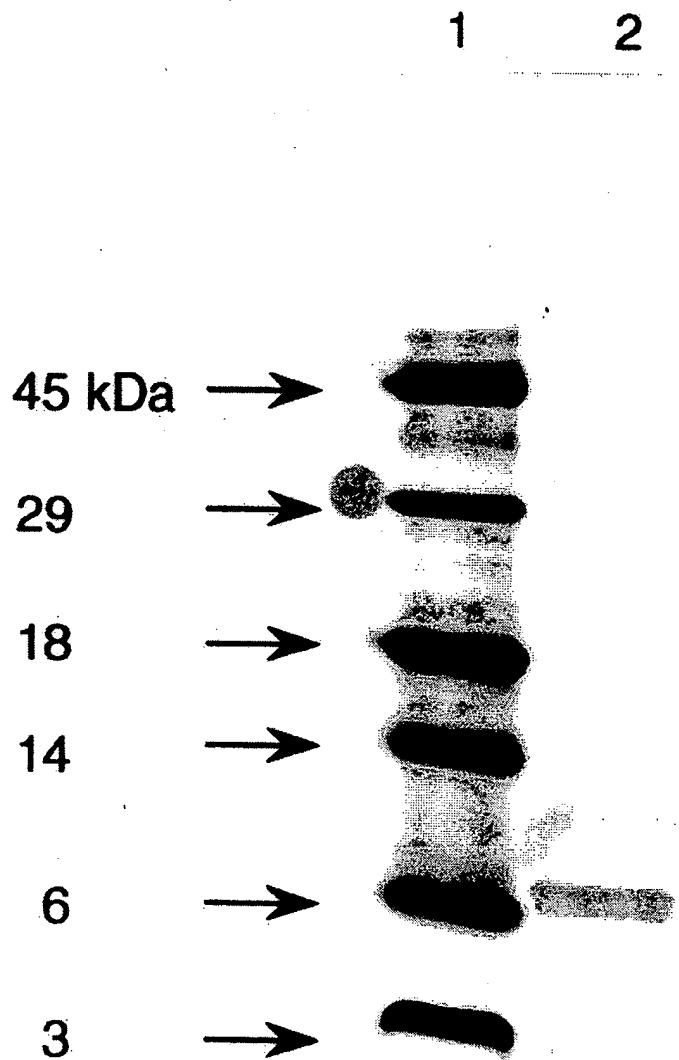
SDS-PAGE





38/44

FIG. 10





39/44

FIG. 11A

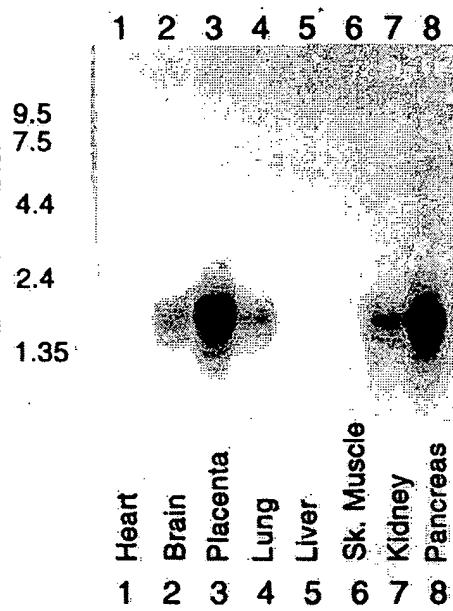


FIG. 11B

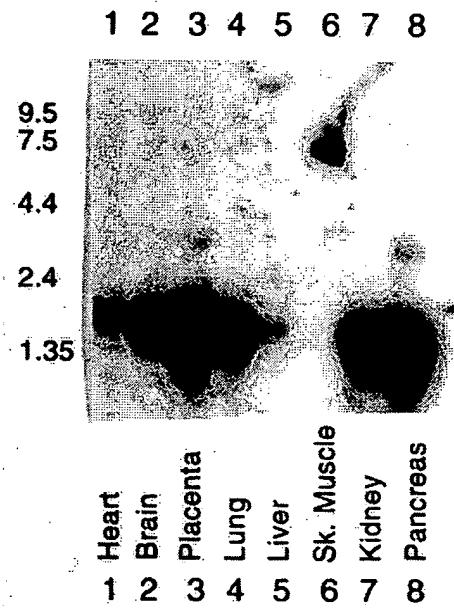


FIG. 12A

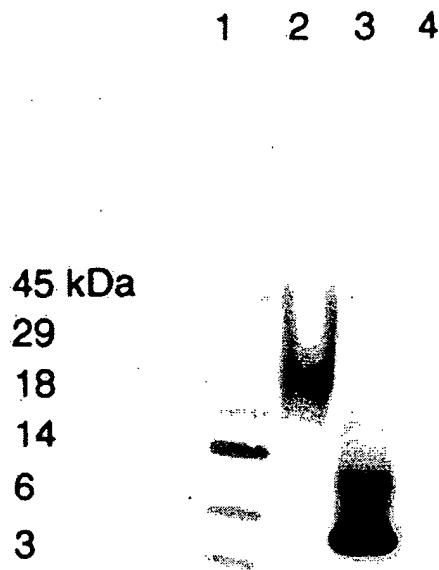
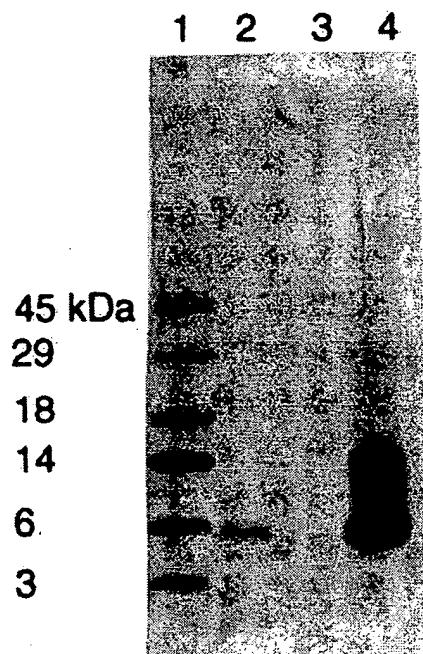


FIG. 12B





40 / 44

FIG. 13

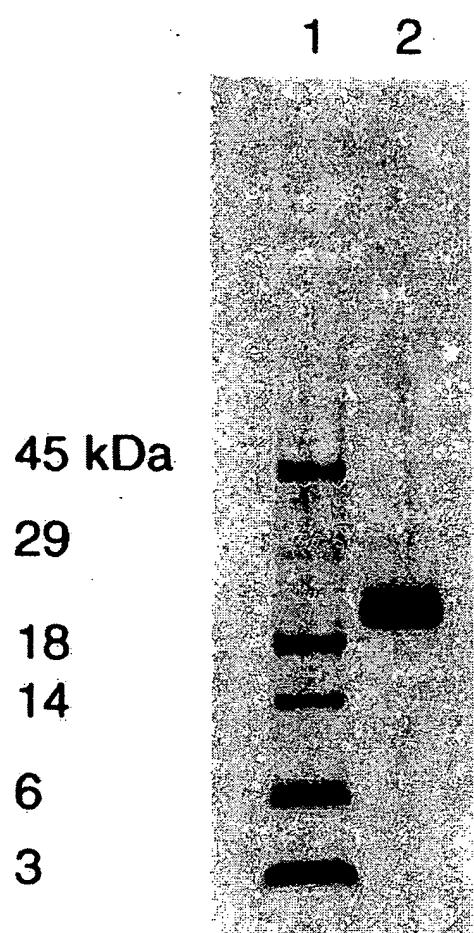


FIG. 14

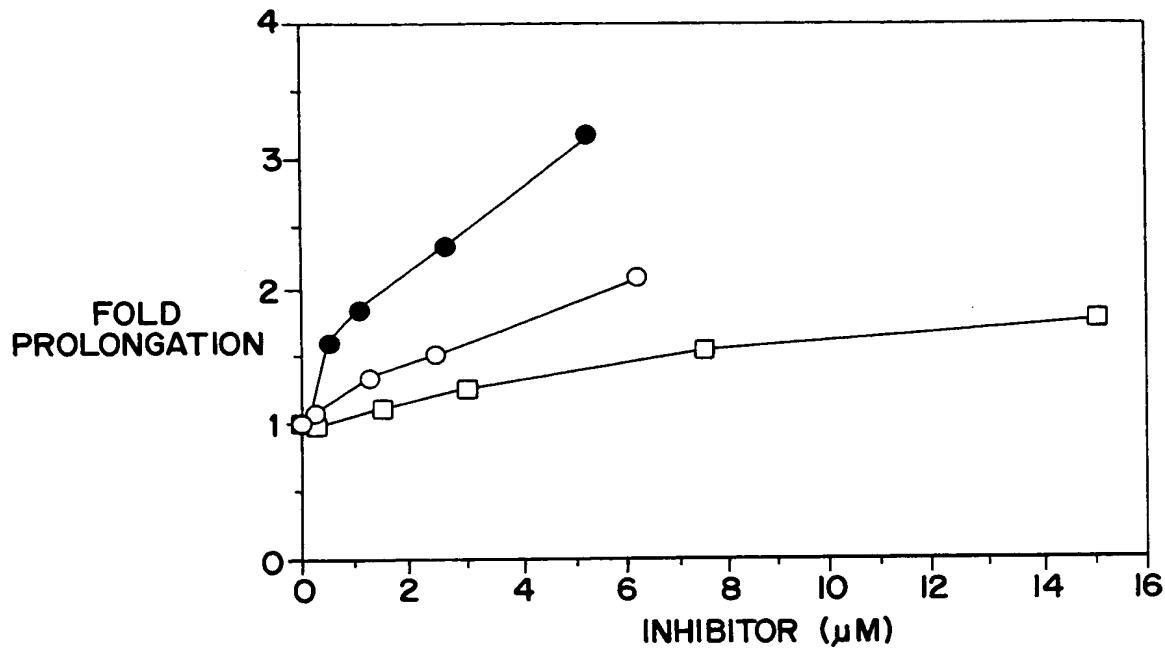
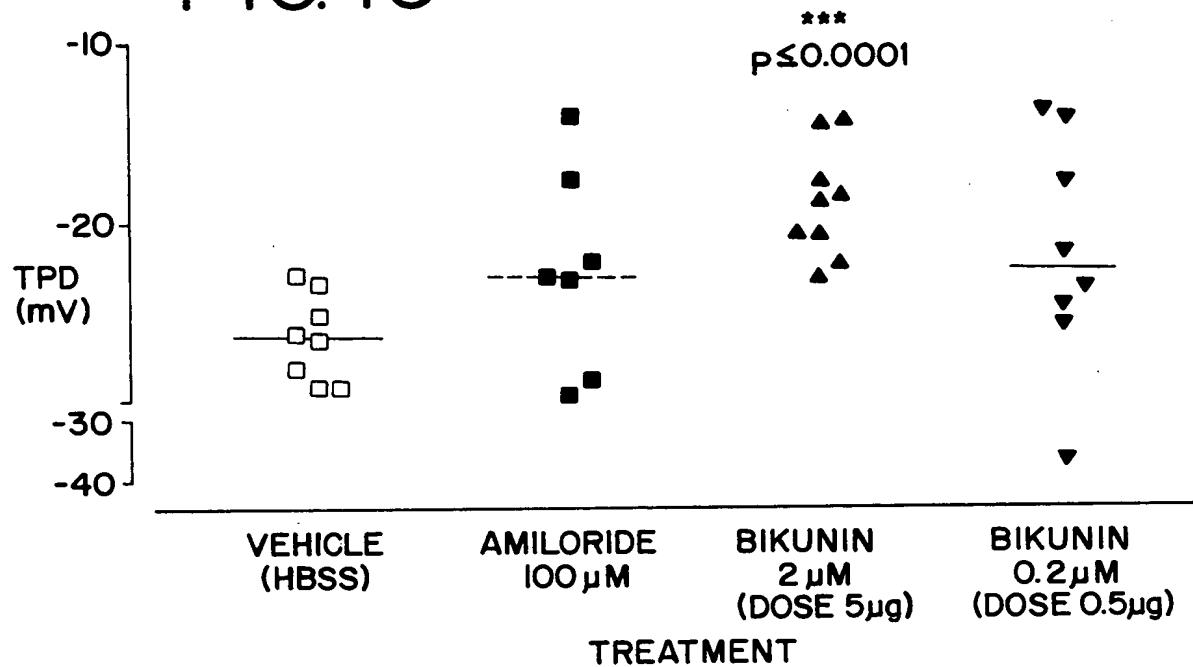


FIG. 15





42/44

FIG. 16A

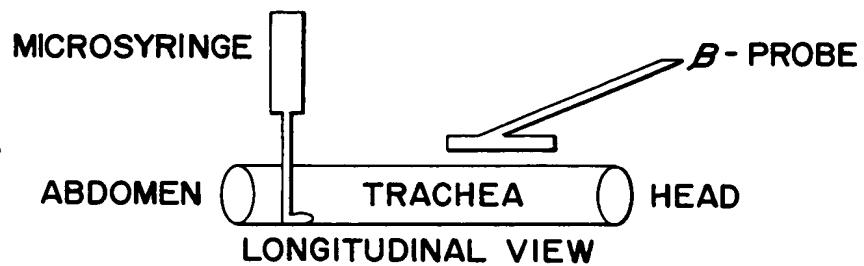


FIG. 16B

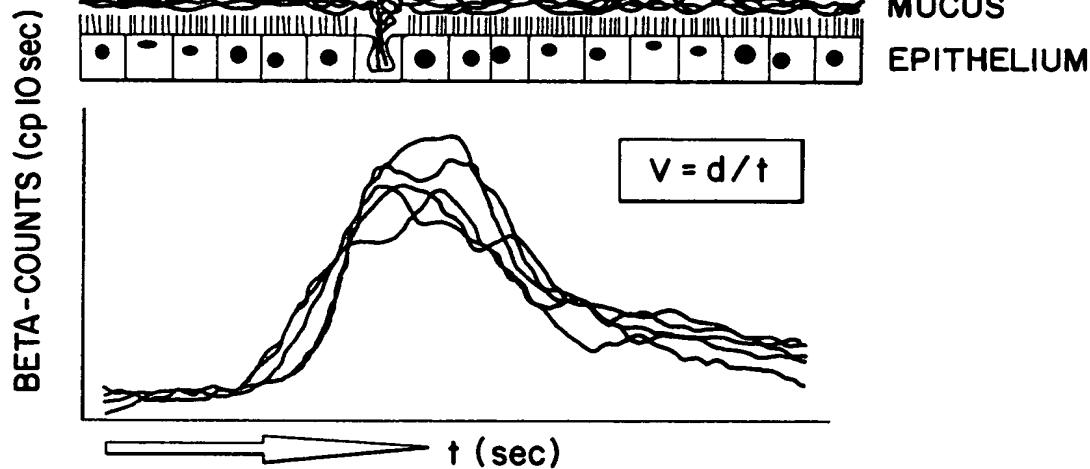


FIG. 17

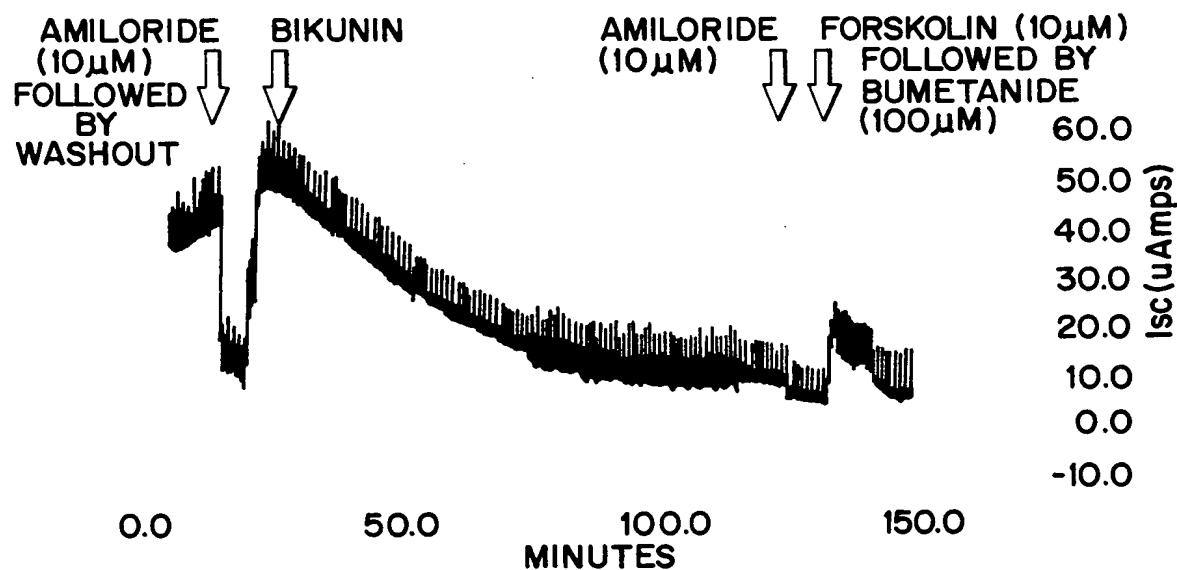


FIG. 18

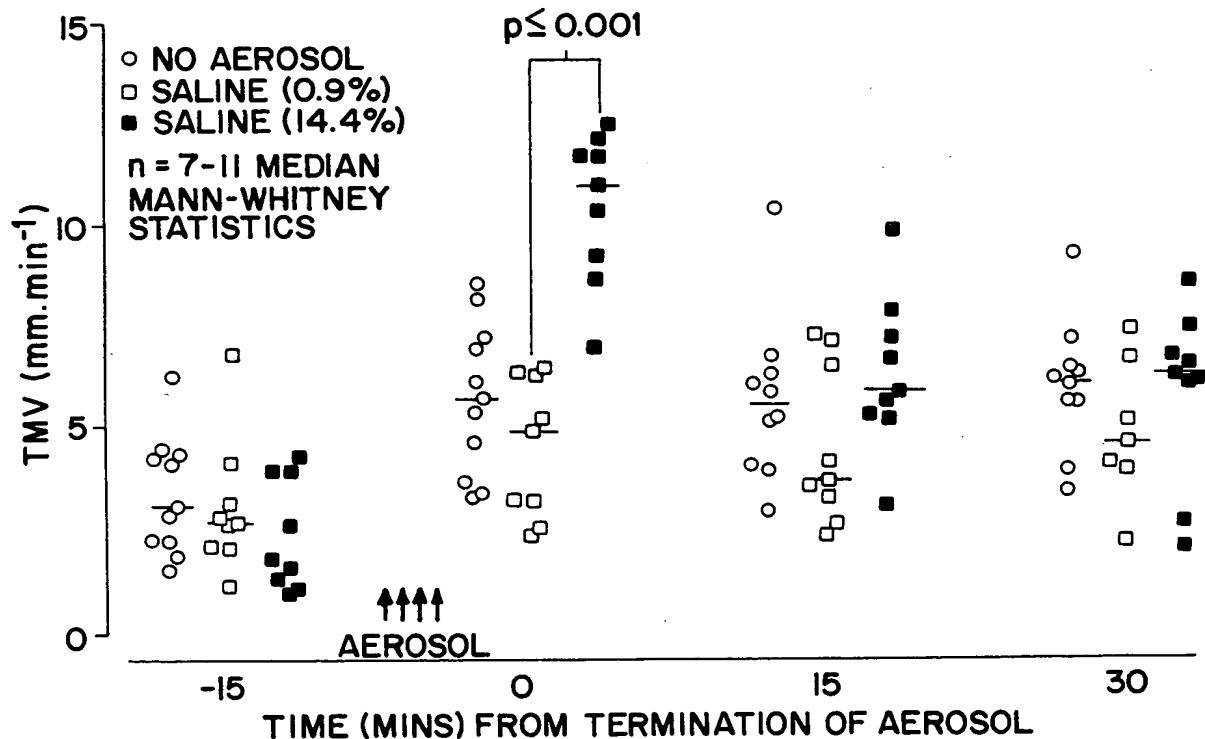


FIG. 19

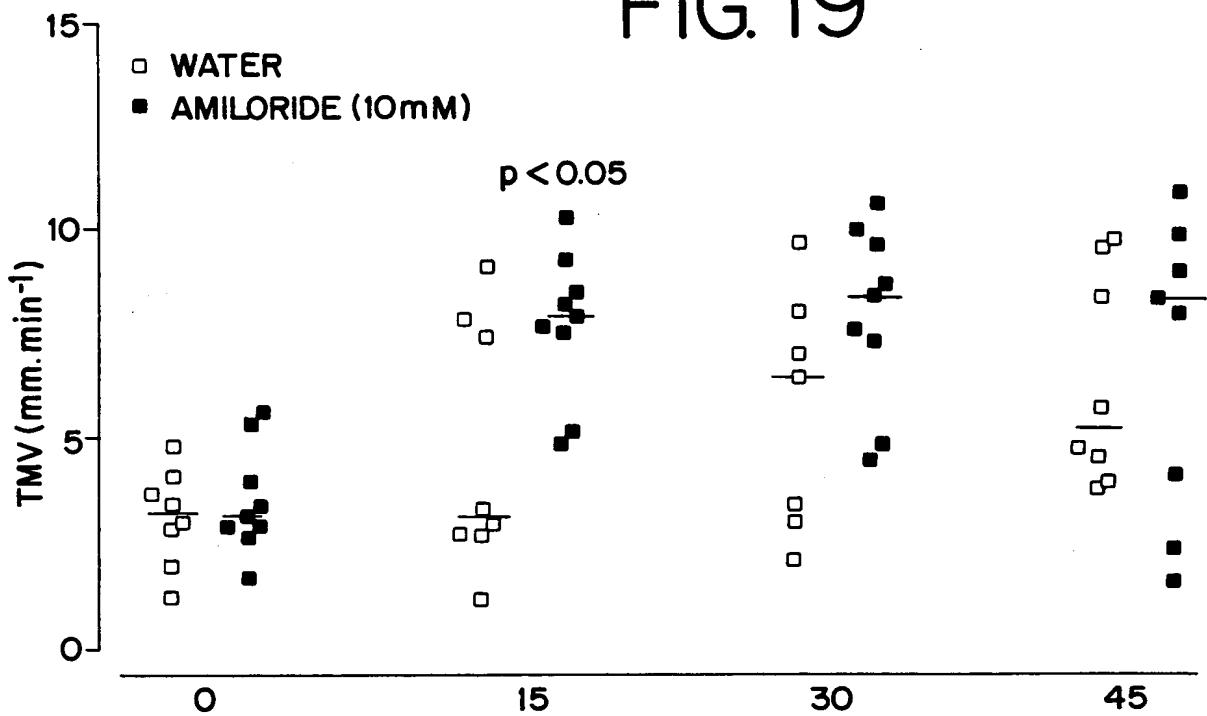


FIG. 20

